THE AUTOMOBILE

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CLUB INFLUENCE IN SOUTHERN CALIFORNIA.

ACCUSTOMED as we are to think of the East as the center of automobiling, some unusual event occurring west of the Sierras every once in a while forces upon attention the fact that the automobile has secured a strong hold on the Pacific slope. Race meets, parades and tours are held in San Francisco, Los Angeles and Pasadena and surrounding territory just as they are in New York, Boston, Buffalo, Syracuse, Cleveland and Detroit. The latest event scheduled in California is an endurance run between San Francisco and Los Angeles under the combined auspices and management of the Automobile Club of California and the Automobile Club of Southern California. This is to come off in July.

The club spirit of co-operation among automobilists is no more dormant in the land of the setting sun than in the Atlantic Coast States. The Automobile Club of Southern California, which started a year ago with fifteen members, now has a roster of 112, and has its exclusive quarters in a new building occupied below as a garage.

A peculiarity of the organization is that its by-laws exclude from active membership any person directly interested in the manufacturing or selling of automobiles. The club takes the position that, while the value of the active services of members of the trade in promoting various events is not to be ignored, the entire independence of the organization makes its influence greater for the accomplishment of the objects of organization—improvement of the streets and roads, defeat of unjust and burdensome legislation, propagation of interest in automobiling and the development of the automobile as a pleasure and business vehicle.

To dissipate as early as possible such prejudices as were forming against the automobile, the club seized the opportunity last April, when the associations of supervisors and sheriffs of the State of California assembled in Los Angeles, to extend an invitation to the delegates to be its guests on a

MEMBERS OF THE A. C. OF SOUTHERN CALIFORNIA AND GUESTS VISITING CAWSTON OSTRICH FARM ON THEIR RUN TO POMONA.

run to Pomona, forty-one miles east of Los Angeles. About 140 persons accepted the invitation, and forty-two vehicles made the trip. A banquet provided by the Board of Supervisors of Los Angeles County was served at Pomona. On the outward trip a stop was made, upon the invitation of Mr. Cawston, one of the enterprising members of the club, at the Cawston Ostrich Farm at South Pasadena, one of the unique points of interest on the Coast. The entire party was royally entertained there by the proprietor. The photograph reproduced on the preceding page was taken while the guests were viewing the farm.

Of the forty-two cars that started on this run, only one failed to complete it—a pleasing contrast with the club run to Redlands about a year before, when nineteen cars started and only six succeeded in making the round trip. The drivers of the cars on the Pomona run were leading citizens of Los Angeles who voluntarily gave their time and money to make the demonstration.

Last month the club held a parade in Los Angeles as a demonstration against a proposed ordinance fixing the speed limit at eight miles an hour throughout the city. Invitations to be guests were sent to the mayor and other officials of Los Angeles and Pasadena, and to members of the local business men's organizations. These responded generously and there were 211 well-filled automobiles in the procession that moved through the leading streets. The demonstration ended with exhibitions of cars moving at various speeds, and the universal opinion was that as a result a more liberal speed ordinance would be passed.

Perhaps the most important work that the club has yet undertaken is that of furthering the grand project of El Camino Real—the Royal Road connecting the twenty-one old Spanish missions of California. This will stretch its meandering length for 550 miles from San Diego on the south to San Francisco and the Solano Mission on the north. Secretary A. P. Fleming, of the Automobile Club of California, was elected president of a State association organized by 100 patriotic Californians at Santa Barbara to undertake the building of this unique highway. The president, assisted by an executive committee and secretary, is now organizing local associations throughout the State to work in conjunction with the State association. When finished this road will be one of the best in the country for automobile touring, owing to its scenic beauties, its delightful winter climate and the historic associations of its ancient missions.

PARISIAN chauffeurs will, it is reported, be compelled in future to pass an examination in the driving of automobiles, knowledge of the various parts of the machines, care and maintenance, repairs, police regulations and signals, and lastly, they will be examined as to their physical soundness and morality.

Hints to Touring Car Purchasers.

Proper Care and Adjustment of a Car Upon Its Delivery from the Builder's Factory, with Explanatory Photographs.

BY JOSEPH TRACY.

MANY owners who purchase a car for the first time, or who have graduated from the runabout class to that of the touring car, are at a loss to know just what to do and what not to do when their car first arrives. Those who live in the larger cities, of course, have the advantage of being able to discuss matters of detail with the manufacturer's representatives. There are, however, many purchasers who live at considerable distances from the builder's shops or even of district agencies, and for the benefit of such, chiefly, the suggestions here given are intended. The true automobilist really finds as much pleasure in learning the how and the why of his car and in keeping it up to the top notch of efficiency as he does in driving it along the roads. And it is without doubt the desire of all to drive well. A little patience added to a lively interest will soon make the owner a skilled automobilist, and though the details may appear multitudinous in print, yet in practice they soon spread themselves into an interesting programme of easily mastered realities.

FIG. 1.—TESTING TIRE VALVE.

Upon purchasing a touring car it is well for the owner to procure and carefully study all the literature on the subject issued by the builder. We may assume therefore that the reader has done so, and has received his new car in good condition from the local freight agent.

In taking the car from the crate look out for nails which might puncture the tires. If one or more tires are flat when the machine arrives it is advisable to examine the inner tubes. In removing these from the shoes or outer covers use great care in manipulating the tire levers so as to avoid pinching or cutting the tubes—a thing that frequently happens with novices. The tube can now be pumped up to a light pressure and immersed in a tub, or other suitable vessel, of water when leaks, if they exist, will be detected by air bubbles rising from the tube. If the tires are not badly deflated, however, they should be pumped up so that the length of the contact between the tire and floor will be from 2 to 4 inches, according to the wheel diameters, and number of persons to be carried.

The tire manufacturers usually specify the pressure to be used, and it is well to be guided by their instructions. If after being pumped tight the tires gradually lose air—say it takes an hour or more before a tire is flat—the valve is doubtless to blame and should be taken out and examined. If the rubber head on the valve plunger is found to be in bad condition it should be replaced by a new one, and the valve put back and tested for leakage. This is accomplished by turning the wheel until the valve stem is at the top and in a vertical position. If the tire is now inflated, the pump connection removed, and a glass full of water placed under the valve stem (see Fig. 1), and close enough to the wheel rim to allow the end of stem to be immersed in the water, bubbls will rise through the water if the valve is not tight. In putting a tube back which has been in water, see that it is thoroughly dried before it goes into the "shoe."

The wheels should now be examined by jacking up each separately and taking the hub caps off, noting whether each wheel revolves freely and yet does not shake, or is not too loose. Satisfy yourself that the fastenings which hold the wheels on the axles are well secured, as a wheel coming off at any but the slowest speed is sure to cause a bad accident. Don't forget to grease or oil the hubs thoroughly before putting on the caps.

See that the steering gear is free and oiled in its working parts, and that it can be operated easily with one hand when the car is rolled over the floor. It is good practice to cover the various joints in the steering mechanism with leather envelopes, which are filled with grease and held on by straps, and so prevent mud and dust from working between the moving parts.

The water, gasoline and oil tanks may now be filled, and the piping, valves and stopcocks connected with them, especially

the gasoline pipe, carefully examined for leaks. In filling up, it is a good plan to have separate funnels for gasoline, oil and water, and to have all funnels fitted with strainers. Although the filling of a tank is a very easy matter, yet there are more ways of doing it than one—the right and the wrong. When filling the gasoline tank out of one of the regulation gasoline cans do not hold the can with the opening at the lowest point, as shown in Fig. 2. In

FIG. 2.—THE WRONG WAY.

this position the air rushing in to fill the space occupied by the gasoline poured out causes the fluid to come out in a very jerky manner—not only wasteful but unsafe. The

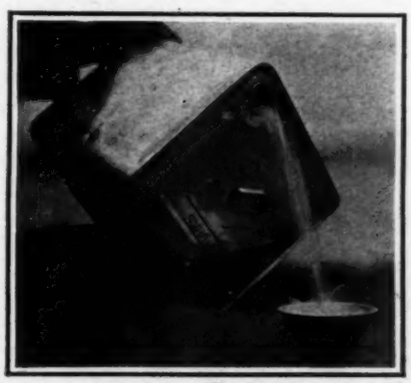


FIG. 3.—THE RIGHT WAY.

correct way is illustrated in Fig. 3. By holding the can with the opening uppermost the air can rush in above the descending stream of gasoline, and with a little practice not a drop need be wasted.

In filling the oil reservoir on the dash many drivers thoughtlessly hold the can over the footboard, as shown in Fig. 4. In this position any oil that happens to drip falls on the rubber mat and in a short time causes soft spots. It is just as easy to hold the body of the can over the bonnet so that any dripping can be easily cleaned off with waste and do no harm. (See Fig. 5).

If the motor jackets, water tank and pipes have been drained completely, it will usually be found impossible to entirely fill the circulation system, as air may be pocketed in the pipes and jackets. If no vents are provided the motor must be turned smartly by hand or started and run for a few minutes, when the water level will be found to have dropped in the tank. This should now be filled to the top or until the water escapes through the overflow pipe, which shows that the latter is clear.

After turning on the gasoline examine the carbureter to see that the gasoline escapes from the spray nozzle when the float is depressed, the nozzle being exposed for this purpose, also that the small hole which is provided to carry off the overflow from the nozzle is not stopped up. When the motor is not running the gasoline should not overflow at the nozzle. If it does it will probably be found that the float-needle valve is off its seat, or something has caught between it and the seat, or the needle may be bent, or may need grinding in. Again the float may be punctured and full of gasoline, so that it sinks and always holds the needle valve open, or this valve may be set "late" so that it does not entirely cut off the gasoline when the float rises, or it may not rise and fall freely on account of sticking or rubbing against the sides of the float chamber.

The machine may now be oiled, beginning with the crank-case, which should be emptied and washed out with kerosene before fresh oil is introduced. The quantity of oil to be put in the crank case should be that which the manufacturer recommends. It is better, however, to err by using too much rather than too little. In the latter case the cylinders may become badly scored and the efficiency of the motor seriously impaired, while in the former case fouled spark plugs will probably be the extent of the trouble. In every instance sufficient oil should be put in so that the lowest parts of the connecting rods are immersed, about half an inch, when at the bottom of the stroke.

The proper kind of oil to use is a high grade gas engine mineral oil, not too thin, as thin oils usually contain animal or vegetable matter which causes them to smoke a great deal and carbonize at comparatively low temperatures. The oil should not be so heavy that it will not flow through the drips, or that it cannot be pumped.

Oil can be put into the crank case by the hand-pump usually provided, or if there is no pump it may be injected by a "squirt-gun," or oil syringe, through the pipes which carry the oil from the tank to the base. These pipes may be uncoupled at the fitting on the crank case, and the nozzle of the syringe introduced through the opening in the case. The syringe should be a large one, otherwise a good deal of time will be lost in getting the proper quantity into the crank case. If there is an opening provided in the base sufficiently large to admit a small funnel, the oil can be poured in more easily than it can be "syringed" in.

The gear box may now be partially filled with a light cylinder oil or a mixture of good machine and medium heavy cylinder.

If the car has a bevel drive case, the differential may be half filled, with the same kind of oil as the gear box, or thicker oil, as there is generally more chance for the oil to escape from the differential case than from the gear box. The reason for this is that in a car with bevel gear drive the

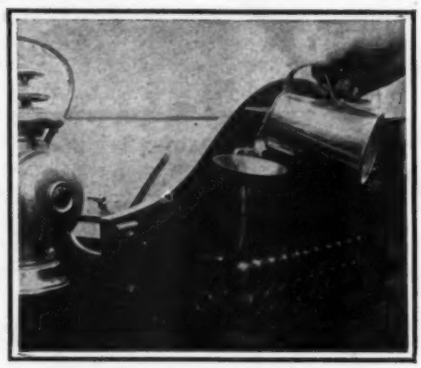


FIG. 4.—THE USUAL METHOD.

back axle is usually fitted with ball bearings, which allow the oil to flow to waste more readily than plain bearings—the latter are commonly used in the gear box.

The joints in the "propeller shaft" should next be washed out by syringing with kerosene and then injecting thin cylinder or good machine oil. These joints should be protected from dust and grit by canvas or leather covers. The foot and hand brake

FIG. 5.—THE CORRECT METHOD.

gear should now be oiled, and then the lever and connections which move the gears.

The "tail" shaft on which the clutch cone runs, the thrust bearings, and clutch actuating mechanism, should all receive their share. Care is necessary in oiling the "tail" shaft, because if too much is injected it will trickle through the bearing, and finally, on account of centrifugal action, lodge on the leather and cause the clutch to slip. For this reason when the tail shaft has been oiled the clutch leather should be well washed with gasoline, using the syringe to inject it.

The governor mechanism, the two to one

gears where they are exposed, the spark, throttle and accelerator connections and the starting crank should also receive a little oil.

TREATMENT OF THE CHAINS.

If the car is chain driven, the chains should be taken off, thoroughly washed in kerosene, dried, and then dipped into melted tallow, mixed with graphite, and allowed to drain before they are replaced. After being treated in this way the chains will probably run from 300 to 500 miles before squeaking or rattling—more if the sprockets are large or the reduction small; less if the sprockets are small or the reduction great. All grease cups on the machine should be filled with thin or soft grease if the weather is cold, or if the cup is at a distance from its bearing, or if the grease pipe is small in diameter. Thick or hard grease should be used if the weather is hot, or the cup close to its bearings. Where the magazine system is fitted, that is where all bearings are fed from a common cup which contains a piston, actuated by a screw, to force the grease through the various pipes, a thinner grease should be used than where separate cups are employed. The reason is this: On account of the large diameter of the magazine piston, the pressure against it is so great that it will be almost impossible to screw it down by hand unless a thin grease, which flows easily, is used.

It is well to examine the couplings and fittings on the oil and grease pipes to see that there is no escape which would rob any bearing of its due and so cause overheating. A leak in a pipe of a magazine grease system is much more serious than a leak in a separate cup system, because it allows the reserve supply of grease to flow out and thus prevents sufficient pressure being applied to force the grease to the other bearings, which suffer in consequence.

BEFORE STARTING THE MOTOR.

After a little kerosene is put into the cylinders, either through the compression taps or, where none are provided, through the spark plug holes, or by means of a special pump which is fitted on some cars, the motor should be started and run for five or ten minutes before the car is moved. This is necessary to ascertain that the motor does not "miss," that the governor acts promptly, that the throttle functions properly, that the motor speed responds to the spark and throttle manual control and also to the accelerator pedal, that the oil feeds or pumps are operating, that the water pump is working and the water circulating in good volume, and that the proper "mixture" is being fed by the carbureter, also that the motor does not "pound" or "knock."

Before cranking the motor see that the ignition is retarded so much that the charge is not fired till the piston has passed the top dead center. This can be ascertained by inserting a wire through the compression tap or plug hole on top of the motor and finding when the piston is exactly on the top center—care must be taken that the piston has just completed its compression stroke—this is the second time that the piston is at the top center after the exhaust valve has closed. When in this position the contact piece on the revolving primary "make and break" disk should just touch the brush which is connected with the cylinder under examination.

IGNITION EQUALLY RETARDED.

If the ignition is retarded sufficiently on any one cylinder it will be found to be equally retarded on all the others, unless the brushes are not spaced the same distance from each other, which is very unlikely. A more frequent defect is that one brush is a little longer than the others, thereby causing it to make contact sooner than the others, where the fibre disk turns toward the brush, and later where the disk turns away from the brush.

If not sure about which direction the control handle moves to advance the ignition, it can be found as follows: Turn the motor by hand in the direction which it will run when in operation, and note the way the make and break disk runs. When the brushes are moved in the same direction as the disk turns ignition is retarded, when moved in the opposite direction it is advanced.

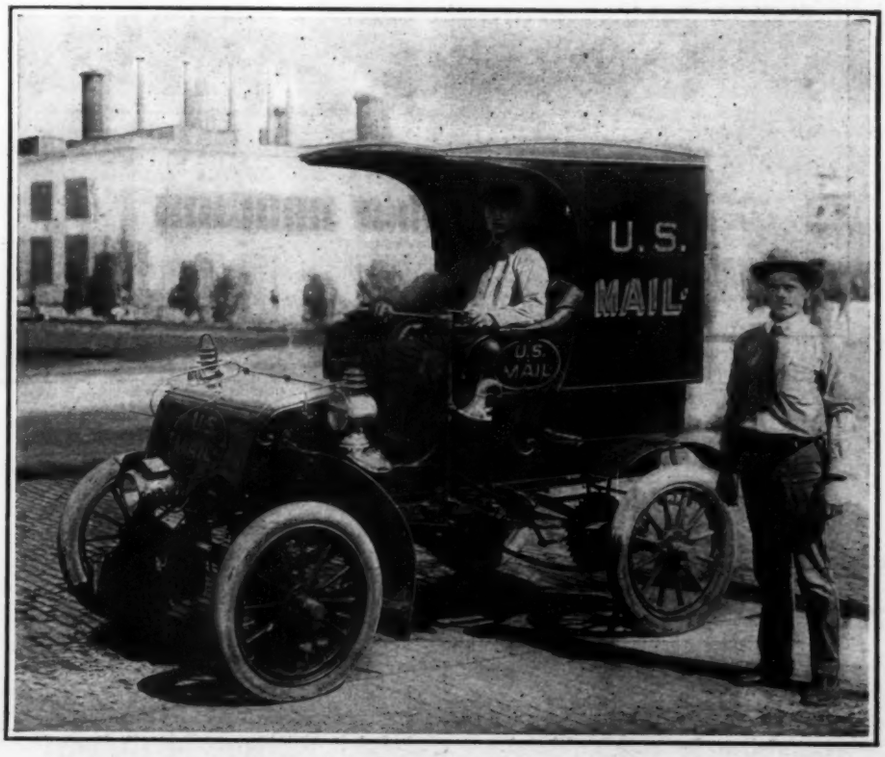
(To Be Continued.)

Mail Collection at the Fair.

The 6-horsepower Knox mail car in use at the World's Fair is making a record for itself as compared with horse service. One automobile and one horse are employed to gather and distribute mail on the Fair Grounds. With the automobile six daily collections are made through the Plateau of States and the part of the grounds called "The Picture," which includes all the exhibit palaces. The mounted horseman collects four times a day through the southern portion of the grounds.

In the morning at 8 o'clock the motor car takes carriers to the several points where they begin distribution. Four men are carried on the first trip and three on the second. This consumes about half an hour. At 8:30 the car, returning from its second trip, stops for the first collection at the Innside Inn. The automobile carries 800 letters to this immense inn at each delivery five times a day. The papers carried by the automobile to the Innside Inn average 1,000 pounds daily. So heavy are the collections which are brought from the hotel that they are unloaded at the postoffice in the Government Building before the car makes any other collections. Each motor car collection through the grounds requires from fifty minutes to one hour. There are fifty boxes on this route. The mounted horse collection requires two hours for thirty boxes.

A $7,000 private automobile house that is being constructed in Columbus, O., for J. W. Kaufman, is nearing completion. It stands in the rear of his residence on Bryden road at the corner of Champion avenue. Mr. Kaufman owns a Pope-Toledo four-cylinder touring car, a Franklin air-cooled machine, and a Baker electric stanhope.



KNOX UNITED STATES MAIL DELIVERY WAGON AT THE SAINT LOUIS EXPOSITION.

American Harmsworth Cup Challenger.

Details of Construction of Auto Boat Challenger Built by Smith & Mabley for International Power Boat Race.

THE auto boat *Challenger* was completed in the shops of Smith & Mabley on the East River in New York, Saturday last, and was subsequently turned up so as to be in racing condition in time for shipment to take part in the Harmsworth cup race. The *Challenger* was designed by Naval Architect C. H. Crane, of New York, and was built in the new Smith & Mabley automobile factory, the main floor of which is at present being used as a boat shop. The smaller auto boat *Vingt-et-Un II* was previously launched from the same place, and there is also a third boat nearly completed, a speed boat of 38 feet over all with a 75-horsepower motor, for M. C. Hermann.

Nearly all American auto boats designed with a view to speed are of one of two types, with a sharp V-section to the entire length of the run, as followed by the Herreshoffs in many torpedo boats and the well-known speed launches *Vamoose, Javelin, Mirage* and *Scout*, the after end of the load water line running to a point; or the so-called "torpedo stern" type used in the Mosher boats *Ellide* and *Arrow*, the Leighton and many other fast boats. Mr. Crane's studies have led him to follow a modified type, that developed by the noted French naval architect, J. A. Normand, one of the recognized authorities on torpedo boats and whose ideas of construction have been embodied in some of the torpedo boats of the U. S. navy.

The new Harmsworth cup challenger is of the same general type as the *Standard* and the French boat *Lutece*, designed by Tellier. As the limit is 40 feet over-all length, the new boat has a plumb stem, a hackmatack knee faced with sheet brass and brought to a fine edge, the depth from bottom of keel to deck being apparently about 3 feet 6 inches. There is a deep square forefoot, the keel running along straight to the midship section and then rising gradually until it meets the sharp angle of the transom at a depth of several inches below the water. There is apparently a good amount of freeboard, the sides flaring out at the bow and to a point abaft the midship section and then tumbling in until the deck ends in a sharp point at the angle of the transom. The load water line seems rather full forward, but the breadth is carried very far aft, making a long but not specially fine entrance, and this breadth is then held almost to the transom. The transom is vertical, but instead of being square like the end of a box it shows two vertical bevelled faces, the horizontal section being a flat V.

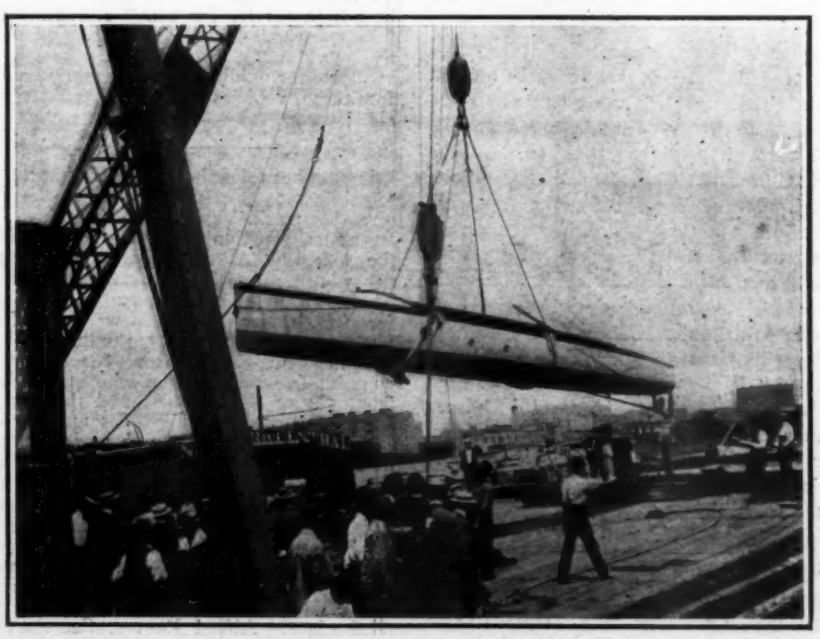
The forward sections are round, deep and quite full below water, with an easy flare above to the deck, these growing into a midship section with quite a marked deadrise, the bottom slightly rounded and merging into an easy bilge and flaring topside. All the after sections are of flat V form out to the transom, the round just below the waterline and again in the topsides making them approximately of elliptical form toward the extreme after end. The whole form of the boat is fair, with no lumps and hollows, such as are apparent in most "whittled" models, and the lines are round and full rather than excessively fine. As befits the large and powerful motor which she carries, the boat is able and powerful in model, with a moderate amount of wetted surface for her displacement.

SMITH & MABLEY AUTO BOAT "CHALLENGER."

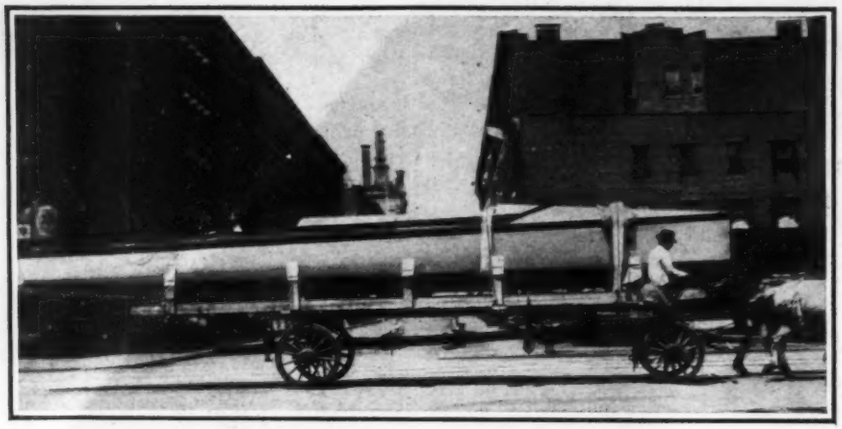
The forward deck shows a well-crowned turtleback, then there is a single long cockpit with a flat after deck. The motor, of 150-horsepower, already described in THE AUTOMOBILE of June 11, is about 8 feet long over all, the after end being a little abaft the center of the hull. Here there is a bulkhead of 1-8-inch bronze, lightened by various circular holes from four to six inches in diameter where strength is not specially required.

This bulkhead is stiffened by several small steel angle bars. Just ahead of the flywheel, on the forward end of the motor, is a similar bulkhead so cut away to admit of the removal of the flywheel as to form really two deep web frames, also stiffened by angles. Running fore and aft and raking upward at their fore ends are two built-up channel beams about 6 inches deep, and two feet apart, their after ends secured to the bulkhead and one fore end to each of the web frames. The weight and strain of the motor is carried entirely on these channel beams and from them transferred to the bulkhead and half-bulkhead and thence to the hull proper.

The keel is of oak, rabbeted for the planking, which is of ⅜ inch mahogany below the waterline and white cedar of the same thickness above. The frames are spaced about 6 inches on centers, every third one being a deep frame, about 1¾ by ½ inch, with the two adjoining frames, each about ½ inch square. Inside each seam is laid a fore-and-aft ribband of oak or other hard wood, about 1 inch wide and 3-16 inch thick, thus making a lap of ½ inch on each plank, to which it is well fastened. These ribbands run under the frames, which are jogged to fit over them. There is a light shelf, about 1 by 2 inches, and one bilge stringer of about the same dimensions, on each side. The forward deck is of thin wood covered with painted canvas. The coaming is set in some three or



HUGE FLOATING DERRICK LAUNCHING AUTO BOAT "CHALLENGER" IN EAST RIVER.



MOVING AUTO BOAT "CHALLENGER" FROM BUILDER'S SHOPS TO LAUNCHING PLACE.

four inches from the gunwale and is of mahogany, about 6 inches high.

The motor occupies the greater part of the forward half of the cockpit, but there is ample space for one man to stand just abaft the fore deck. Here, forward of the flywheel, are located the rotary water pump, for circulation and clearing the bilge, the two rotary oil pumps for the crankcase and cylinders, and the air pump, also rotary. About two feet abaft the middle bulkhead is a second bulkhead of mahogany, making a place for the engineer, and abaft this is a cockpit about 4 feet long, for the helmsman. The steering is thus done from a point well aft in the boat, clear of much of the spray and with every chance to hold the boat steady by a long sight over the stem on an open course. The wheel is of the car type on a vertical shaft.

The mechanism for cranking the motor consists of a long shaft on the starboard side of the motor, carried on two brackets from the channel frames, the fore end fitted with a sprocket and chain connection to another sprocket on the main shaft which carries pawls engaging in a ratchet wheel connected with the flywheel. A crank on the after end of the fore-and-aft shaft is operated by the engineer. The reversing gear is large and powerful, with four heavy beveled drums of hide, it is also operated by a crank, shaft and sprocket from the engineer's cockpit.

The motor is placed slightly to starboard of the centerline, the shaft is of steel, about 1¾ inches in diameter, supported by a short bracket just outside the hull and a longer one just forward of the wheel. The bearings in both of these brackets are positively lubricated by tubes from inside the hull passing down through the brackets.

The rudder is hung outside the hull at the apex of the V transom, the stock is of forged bronze with a blade formed of two thin sheets of bronze riveted together on the edges—the construction generally followed in racing 20 and 25 footers. The boat builders have turned out a beautiful piece of work, the hull being fair throughout and perfectly smooth; the bottom is finished in copper bronze and the topsides in white enamel.

Though the Smith & Mabley factory at the foot of East Eighty-third street, New York, is built on the river, the conditions are such that the boat could not be launched at that point. A cradle of heavy timbers was built under the craft, and the whole placed on a truck and hauled to a pier at the foot of East Ninety-sixth street. Here a huge marine derrick was in readiness. The boat was placed in a double loop of heavy rope, one bight coming just forward and the other just aft of the motor space, and was hoisted clear of the truck, swung across the deck of the derrick scow and gently dropped into the river on the other side, the whole operation taking but a couple of minutes after the sling had been adjusted. Extreme care was necessary in handling the racer, as the motor weighs 1,800 pounds, while the hull is little, if anything, over 900 pounds.

EARLY TOURISTS REACH THE FAIR.

Special Correspondence.

ST. LOUIS, June 25.—A number of automobile tourists have arrived at the World's Fair. Mr. and Mrs. G. H. Wilson, of New York City, came overland and are now using their Darracq car to and from the Fair and in touring the suburbs of St. Louis. Their trip was made over the route mapped out by the American Automobile Club through Kingston, Binghamton, Buffalo, Cleveland, Chicago and Springfield, Ill. Tools and baggage for the trip were carried in the tonneau. Only one set of tires was used and these are still good for several hundred miles of service. The only bad roads encountered were between Chicago and St. Louis.

Regarding the trip Mr. Wilson said: "We enjoyed it immensely. At the close of each day's run lodging was secured at places recommended by the A. A. A. committee. Our trip covered just sixteen days, and if business did not prevent I should like no better sport than to go home the way we came."

A STATUTE mile is 5,280 feet; a nautical mile is 6,080 feet. A knot is a measure of speed, not of distance, and is equal to one nautical mile per hour. To reduce knots to miles per hour, multiply by 1.1515.

MAGISTRATE'S DECISION REVERSED.

A decision handed down Wednesday by Judge Newburger in Part I., General Sessions Court, New York, is of importance, for it strikes a blow at the practice of fining automobilists for speeding, upon the unsupported testimony of a policeman. Dr. J. Ralph Jacoby, of New York, was recently fined $25 by Magistrate Crane for alleged speeding of his automobile in Central Park. The officer making the charge declared, as usual, that the machine was running 18 miles an hour, Dr. Jacoby denied the charge, stating that as he was following a horse-drawn vehicle and several other vehicles had overtaken him, such speed was impossible. Magistrate Crane ignored the denial, however, and, saying that he believed the officer, imposed the fine. Dr. Jacoby paid the fine under protest and appealed, claiming that he had not been proved guilty and that in other respects the proceedings had been irregular and illegal. His contention was upheld by Judge Newburger, who ordered the fine returned.

CHAUTAUQUA COUNTY PARADE.

DUNKIRK, N. Y., June 23.—Fifteen cars were in line in the automobile parade held jointly by Fredonia and Dunkirk automobilists. The caravan was composed chiefly of runabouts, though one large French touring car took part. The line of march led through Dunkirk, along the shore of Lake Erie and then to Fredonia. A decided novelty in automobile parading was the finalé, which consisted in the christening of a baby at the Dotterwich mansion. The parade was the first of its kind held in Chautauqua County, and was a great success. After it was over a canvass was made and it was found there were twenty-four automobiles owned in the two neighboring towns. It was at once determined that a club should be formed, and a committee was appointed to arrange details of organization.

COMMERCIAL VEHICLES IN BUFFALO.

BUFFALO, June 27.—Automobile trucking will be entered into in this city by a company being organized by F. R. Corbett, 66 York street. George Miner is also interested in the enterprise. Large trucks will be put in service for heavy freighting and smaller vehicles for light parcel and package work, while two heavy trucks will be available for public hire. The motive power for these vehicles has not yet been decided upon.

IT HAS been definitely decided that an automobile race meet will be held at the Empire City track, Yonkers, on Saturday, July 16, and a sanction has been secured from the American Automobile Association, under whose rules the meeting will be held. The program of events includes a 15 mile free-for-all, for machines weighing from 1,432 to 2,204 pounds; ten mile race, for machines weighing from 881 to 1,432 pounds; five miles, for machines weighing from 551 to 881 pounds; and the Empire City Handicap, five miles, for machines of any class, weight or motive power. Match races and record trials will also be run, and some good sport is anticipated. It was rumored that the Buffum 8-cylinder racer, styled the *Central Greyhound*, would be entered in some of the events, but inquiries at the Central garage elicit the information that there is no intention, at present at least, of disturbing the repose of this untried giant. Alfred Reeves, Secretary of the Empire City Track Association, will receive entries up to Monday, July 11.

Vingt-et-Un II Defeats Fiat III.

Match Races are Held From Larchmont Yacht Club in Long Island Sound—Winner Attains Speed of 19.46 Knots.

A NOT very satisfactory ending came of the long talked of auto boat match between the New York firms of Smith & Mabley and Hollander & Tangeman during the week. However, it demonstrated that even a modern auto boat cannot run on air alone, but requires for the operation of its motor some inflammable vapor.

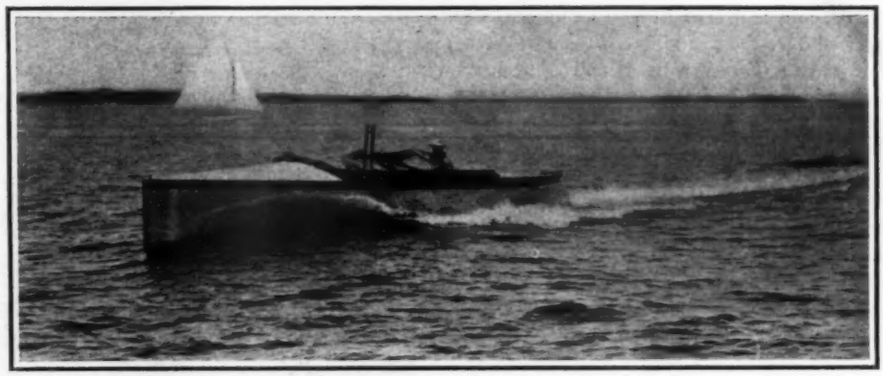
The match was to be the best two out of three and on the showing made the decision was given *Vingt-et-Un II*. After months of preparation and the expenditure of much time and money in the production of two extreme racing machines, the first race proved a failure, the *Fiat III* stopping within seven or eight miles of the start and the *Vingt-et-Un II* barely drifting over the finish line under her own momentum before she too was dead. The trouble in each case was due to the lack of gasoline, a matter of sheer carelessness.

The two launches were at Larchmont, on Long Island Sound, over Sunday, and on Monday morning they were measured and examined by the technical committee specially appointed to manage the match. Both are new and untried, built especially for this contest, the *Vingt-et-Un II* having been launched on June 18 and the *Fiat III* on June 24.

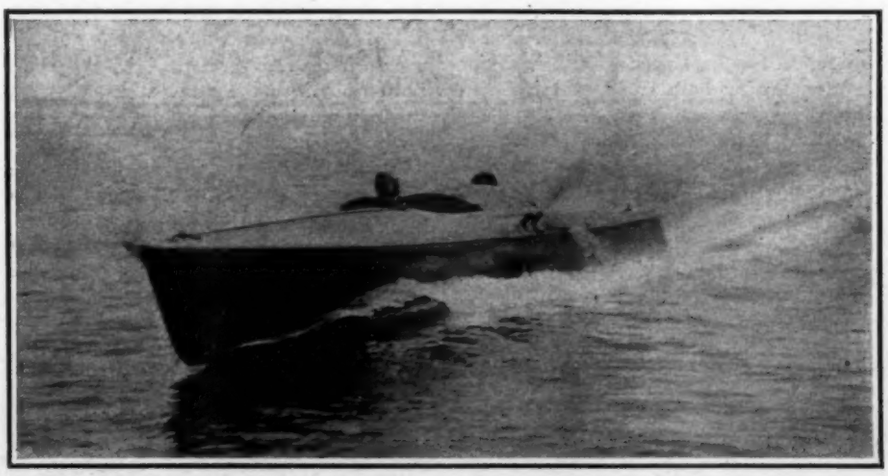
The former was designed by C. H. Crane and built by Smith & Mabley at their Eighty-third Street shop, in New York, the model being of the Normand type. She is 39 feet 11 inches over all; 39 feet 9 inches on the water line, and 4 feet 9 inches in breadth. The hull is of ribband-carvel construction, finished in white above the water and bronze below, with mahogany deck. There is a single long cockpit, with turtleback forward and movable hatches over the motor. The helmsman stands abaft the middle of the boat. The motor is the new Smith & Mabley 75-horsepower already described in THE AUTOMOBILE; its official rating at 800 revolutions is 59.7-horsepower; the rating of the boat being 84. C. M. Hamilton was at the wheel.

DETAILS OF FIAT CONSTRUCTION.

The *Fiat III* was designed and built by the Electric Launch Company, at Bayonne, N. J., and is of double-skin construction, with outer planking of mahogany. She is 39 feet 11 inches over all; 38 feet 4 1-2 inches on the waterline, with stem raking forward and the "torpedo stern" of the first *Fiat* launch. The turtleback extends about to the center of the boat, entirely covering the motor, the engineer occupying a small cockpit just abaft the motor, the deck from here aft having only a moderate crown. The helmsman has a small cockpit forward of the motor, his head just showing above the turtleback. The motor, a four-cylinder, is from a F. I. A. T. car, made in Turin, Italy. It was tested on the blocks to 97-horsepower at 1,800 revolutions, but its rating was taken at 1,250 revolutions, at which speed the horsepower was 66.25, making the rating of the boat 85.6. At this rating she allowed *Vingt-et-Un II* 1 minute 39 seconds in thirty miles.



VINGT-ET-UN II REELING OFF MILES IN LONG ISLAND SOUND AT THE RATE OF 19 KNOTS.



AUTO BOAT FIAT III CROSSING THE LINE IN THE MATCH RACE AT LARCHMONT

CHARTERED STEAMER FOR SPECTATORS.

The pasenger steamer *William Storie* was chartered by the two firms to follow the racers, the tug *Unique* being chartered for the race committee. The *Storie* left New York early on Monday morning with a party of guests and ran up the East River and over the course of the ill-fated excursion boat *Slocum*, arriving off Larchmont, N. Y., about 11 o'clock. Although this was after the announced hour, there was no sign of the launches as the *Storie* lay outside Larchmont Harbor, the tide being out. After a long delay the Larchmont Yacht Club launch brought out more guests and in course of time the racing boats ran out, the *Fiat III* first, Mr. Tangeman's yellow head showing through the turtleback as she chased about the Sound at speed.

Even with the boats at hand there was no attempt to start until 2 o'clock, though it was intended to get off two races in the course of the day. The *Fiat III* seemed to be running well, in spite of a bad discharge from her exhaust, which led up into the air over the port gunwale. The *Vingt-et-Un II*, however, was idle at times alongside her tender, the crew evidently busy with her motor.

COURSE WAS A TRIANGLE.

The course was a triangle, the first leg from off Larchmont across to the mouth of Hempstead Bay, 3 nautical miles, the second down the Sound, 6 miles, and the third of equal length to the line, 15 miles in all, to be covered twice. The start was given at 2-35-30, Mr. Tangeman as usual getting away very smartly within 11 seconds of the gun, while the *Vingt-et-Un II* was a little late, there being 23 seconds between the two as they crossed the line.

As they ran across the Sound, the angle of view constantly changing, it was impossible to gauge the difference, but when near the first mark *Vingt-et-Un II* went suddenly to the front, and after they turned she quickly opened out a long lead. She continued to gain as they crossed Hempstead Bay, running smoothly and steadily on, while *Fiat III* stopped. They were lost to sight for a long time, the *Storie* return-

ing to the starting line. At last *Vingt-et-Un II* was sighted well down the Sound and heading for the line, where she finished the first round at 3-39-07 o'clock.

Fiat III Not in Sight.

As nothing was to be seen of *Fiat III* the *Storie* started on a search which ended off Matinnicock Point, where the launch was lying idly on the glassy waters, the sun beating down on her two unhappy passengers. A hail from the steamer brought back the news from Mr. Tangeman that they had run out of gasoline, this being the sole cause of the trouble.

At this the weary and disappointed spectators of an up-to-date "auto-boat" race revived, and a fire of heated comments was wafted over the Sound, Mr. Tangeman being advised to "Go git a hoss" and to perform other impossible feats. A line was passed to the launch and she was made fast astern of the *Storie*, then refreshments were passed to her hungry crew; they were pelted with biscuits and oranges and by means of a life line a couple of bottles of beer were wafted across the intervening waters. As the *Storie* neared the finish *Vingt-et-Un II* was made fast to one of the markboats, having finished at 4-33-40 o'clock, or at a rate of speed of nearly 15 knots for the course. It further transpired that she too had run out of gasoline within a short distance of the line and only by good luck had held sufficient way to carry her over against the tide.

The *Fiat III* had taken on no gasoline during the day, though Mr. Tangeman was instructed by the committee to so do, just before the start. With the knowledge that her tank, of 30 gallon capacity, was only partly full in the morning, she had run at a high speed for miles before the race was started and yet had neglected the ordinary precaution of filling her tank at the last moment.

Mistake in Marking Course.

Through a mistake on the part of the boatman charged with laying the marks, the second mark of the triangle was a dory with a small flag, not easily seen. Clare Hamilton, who steered *Vingt-et-Un II* failed to find the mark on the first round and ran some distance beyond it before discovering his mistake and returning.

Course for Second Race.

The course for the second race was 15 miles, to the buoy off Eaton's Neck and return, the tug *Unique* being sent away early Tuesday morning.

There was a moderate N. E. breeze and quite a sea out in the Sound, the sky being cloudy with a promise of rain. The crews of both launches were busy with the motors until after 12 o'clock, when *Vingt-et-Un II* ran out to the line where the *William Storie* with a very small party on board was awaiting the start. Meanwhile *Fiat III* lay at the float of the Larchmont Yacht Club, her crew busy with the electrical equipment, as the motor would not work properly.

Some time after 1 o'clock the word came out that the race was off for the day, and *Vingt-et-Un II*, which had been running at speed through the seas, went into the harbor. A few minutes later there was a roar and a rush of waters and the *Fiat III* came flying out, leaping half out of water as she breasted the seas. It seems that after spending the whole morning in a search for electrical troubles the happy inspiration came to look at the carbureter; this was found to be badly clogged with dirt. As soon as it was cleaned and replaced, the motor was started and ran properly.

Committee Now Came Out.

The committee now came out and in passing notified those on the *Storie* that it was ready to start the boats if they wanted to race. By this time a little rain had fallen, the wind was lighter and the sea had gone down. There was a rushing about of launches in and out between the starting line where *Fiat III* was lying after some runs back and forth outside, and the club float where *Vingt-et-Un II* was tied up. At 3 o'clock a launch came out and notified the *Storie* that the race was indefinitely postponed, owing to the heavy sea.

The *Storie*, with a few guests and several newspaper men on board, started back for the city, leaving both launches safely tied up to the Larchmont floats.

An hour later it was decided to start the race, as the sea was much smoother and there was no rain. After the experience of the first day both boats had been fitted with wind shields for the helmsmen. On *Vingt-et-Un II* a couple of pieces of thin pine were fitted in the forward corner of the helmsman's cockpit, on the port side, each projecting a foot above the deck, to give some shelter from the spray. On *Fiat III* a piece of pine was fitted fore and aft in the center of the deck, the helmsman's head finding a partial lee on one side or the other.

The start was given at 5-00-00 p. m., *Fiat III* crossing within five seconds and *Vingt-et-Un II* fourteen seconds later. The latter boat took the lead almost immediately and as events proved continued to gain for the whole distance. By this time the tug *Unique* had left the turning buoy, so no times were taken; after a wait of an hour and a half *Vingt-et-Un II* was visible from the starting line and she finished at 6-32-50 o'clock, *Fiat III* following at 6-53-44 p. m.

The official times were: Start: 5-00-00.

	Finish	*Elapsed*	*Correct.*
Vingt-et-Un II	6-32-50	1-32-50	1-31-10
Fiat III	6-53-44	1-53-44	1-53-44

Vingt-et-Un II wins by 22 minutes 34 seconds corrected time. Her average speed for the 30 nautical miles was 19.46 knots, or 22.45 statute miles per hour.

A. D. Proctor Smith sailed on the liner *Oceanic* for Liverpool on Wednesday and the two launches, the *Challenger* and *Vingt-et-Un II* will be shipped by the *Minnetonka* to London on Saturday. C. M. Hamilton will handle *Vingt-et-Un II* in England, and Mr. Smith will probably pilot the larger boat.

PANHARD BOAT "LA MANOLA" WITH PARTY OF ONLOOKERS AT THE MATCH RACES.

PHILADELPHIA CLUB RUN AWARD.

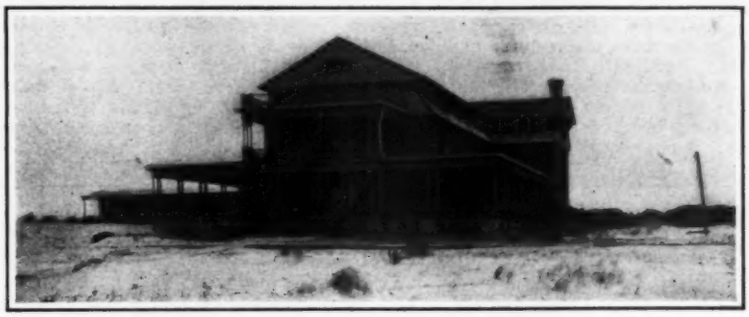
Special Correspondence.

Philadelphia, June 27.—The special committee in charge of the recent Camden-Atlantic City run of the Automobile Club of Philadelphia has finally awarded the Lippincott Cup to Horace A. Beale, Jr., whose Locomobile was the first to report at the finish. Rumors that he had been stopped en route for too fast traveling caused the committee to withhold the cup until an investigation had been made, one of the rules of the contest providing for the disqualification of any entrant who so offended. The investigation failed to develop any such transgression on Mr. Beale's part, and he was finally awarded the prize.

The number of accidents reported during the last few weeks caused by derangement of steering gears is a sharp warning to automobilists to watch this vital part of the machine and keep all its components in perfect condition.

Isle of Palms Beach as Speedway.

ATTENTION of the Automobile Club of America has been called to the suitability of the beach on the Isle of Palms for automobile straightaway speed trials and races. The Isle of Palms, formerly known as Long Island, is situated immediately on the Atlantic Ocean, just outside of Charleston harbor, South Carolina. It is densely wooded and takes its present name from its magnificent growth of palm trees.



HOTEL ON THE ISLE OF PALMS BEACH OFF CHARLESTON HARBOR.

On the western end of the island there is a beach seven miles in length with an average width of about 150 feet. Its least width is 75 feet, which occurs only in a few places, and its maximum width is 250 feet. The beach is composed of white sand packed by the action of the tides so that it presents a surface practically as hard as a billiard table. It is free from quicksand and soft spots, and there is claimed to be no part of the beach on which the heaviest automobile could not stand indefinitely without the wheels sinking. The beach shelves almost imperceptibly into the ocean and is almost absolutely free of wreckage of any kind. At either end of the island the beach is from 250 to 300 feet wide, giving ample room to turn.

An inspection of the beach, whose smooth expanse is shown in one of the photographs reproduced herewith, was made last month by J. H. Kast and J. J. O'Connell, manager and secretary respectively of the Army Cycle Company, and P. H. Gadsden, president of the Charleston Consolidated Railway, Gas & Electric Company, and also president of the Long Island Improvement and Construction Company, which owns the Isle of Palms, with an Orient Buckboard, for the purpose of ascertaining whether the beach was suitable as a speedway for automobiles.

The beach was found to be so hard that no rut whatever was made by the machine, and only a slight mark was left on the beach by the wheels. At the eastern end of the island the turn was made at full speed; and in returning, although no special effort was made to speed the machine, very fast time was made. For several miles it was difficult to find the wheel marks on the beach made only a few minutes before.

The Seashore Improvement Company has developed a summer resort on the western end of the island, erecting a pavilion 300 feet long by 80 feet wide, bath houses, restaurants, cafes, carousal and steeplechase, and a hotel known as the Seashore Hotel, a photograph of which is shown herewith.

The Seashore is a modern hotel of sixty rooms, and in addition to the dining room in the hotel, there is a fully equipped restaurant at the pavilion to accommodate tourists. With the exception of the buildings mentioned there are none of any nature on the island, so that the beach is absolutely free for racing.

The Isle of Palms is reached by a double-end ferry from Charleston to Mount Pleasant, a distance of about three miles, and from Mount Pleasant by the electric road of the Charleston Consolidated Railway, Gas & Electric Company, eight miles. The tracks extend within a few feet of the beach. Automobiles can be taken over on the ferry and transferred from Mount Pleasant to the Isle of Palms on flat cars provided for that purpose, or they can be loaded on lighters at Charleston and taken direct to the Isle of Palms on the lighter.

During the summer the C. C. R., G. & E. Co. operates trains to and from the island practically every hour, the trip being made in 55 minutes. The railroad company stands ready to coöperate in any practicable way to make an automobile tournament on the Isle of Palms a success.

Charleston is on both the Atlantic Coast Line Railroad and the Southern Railway, and is reached from three to four times a week by the Clyde Line of passenger steamers from New York and Boston. It is twenty-one hours from New York and fifteen from Washington, by rail.

Up Snowdon in an Olds.

THE rack railway of Snowdon, the "monarch of Welsh mountains," seems likely to become to English automobilists what Mount Washington is in our own country. On January 26 last, it will be remembered, an attempt by Harvey Du Cros to drive a 15-horsepower Ariel car up that rocky road to fame was balked by an impassable snowdrift. The same man and the same car tried again May 26, this time successfully. Not quite four hours were spent in making the ascent of five miles, a delay due to shearing of the water pump connecting pin being partly accountable for the length of time spent. The car carried two passengers all of the way, and on the steepest grades—said to be 20 per cent.—from one to three more, two standing on the back of the car to give the tires the needed traction in the loose ballast.

Now the feat has been repeated, this time by an Oldsmobile runabout, driven by W. M. Letts, of Jarrott & Letts, in the total time of eighty-seven minutes and net time of fifty-seven minutes, after deducting stop-

GENERAL VIEW OF THE ISLE OF PALMS BEACH PROPOSED AS A SPEEDWAY FOR AUTOMOBILE RACES.

The Detroit Automobile Club last month opened to its members the country clubhouse shown in the above engraving, from a photograph. This house is located on the Pontiac road, near Birmingham, fourteen miles northwest of Detroit. It stands well back from the road with an orchard on one side and a grove of oaks on the other. The building, which is an old residence, has been entirely renovated, redecorated and refurnished. The rear rooms are occupied by a steward and his wife, while the parlors and the second story front are reserved for club uses, the second story room being decorated and furnished in white for the use of the wives and daughters of members. The Ford Motor Company and the Peerless Motor Car Company have loaned the two tents seen in the grounds for use during the summer months.

pages to take on water and to lift the car over the various switches encountered along the way.

Mr. Letts writes that he first conceived the idea of driving an automobile up Snowdon four years ago, and, though owing to

DRIVING ON THE RACK RAILROAD.

a visit to the United States he missed the credit of actual priority, he thinks that his present record is likely to stand for some time. The car was a regulation Olds runabout, which had previously been driven about 50 miles, but which had not been specially prepared for the test. It carried about three gallons of gasoline and four of water. By its lightness it was well adapted to such a test, though the width of its gauge, as the wheels straddled the 31-inch gauge of the railway, and the low position of the differential on the axle, which at one time actually scraped the rack teeth between the rails, demanded both skill and coolness of the driver.

Following Mr. Du Cros' lead, Mr. Letts obtained permission from the directors of the Snowdon Mountain Tramroad Co. for the proposed use of their tracks, and Mr. Atchison, the company's manager, followed the trial in a special train. The start was made at 6.57 a. m., and the climb was made on the low gear through at an average speed of a little under six miles an hour. Two brief stops were made to lift the car over switch points, which, by the way, the Ariel had to pass by driving over planks laid for the purpose. Halfway House was reached at 7.33 by Mr. Letts, the special stopping meanwhile to take on water. At Bwlch Penn Llyn Mr. Letts stopped ten minutes to let the special overtake him, and five more to give the photographers a chance. At 7.55 a stop was made to draw off the hot water in the tank, very little of which had actually evaporated, and replenish with cold. Two more stops were made to lay planks over the ties of open culverts, and at 8.24 the Oldsmobile drew up at Snowdon Summit to await the laboring special train.

Inspection of the photograph shows that the ties were well covered with ballast, but the latter was so coarse and loose as to jolt the car considerably; and, at the point above noted, where the differential case struck the rack, the car narrowly missed being sent over the edge of a thousand-foot precipice before its driver could bring it into the straight again.

We are indebted to the courtesy of Mr. Letts, of London, for the excellent photographs taken during his record-breaking trip.

COLONEL HUNTER'S AUTO CAR.

The following verses were recited upon the felicitous occasion of the presentation of an automobile runabout to Col. John G. Hunter, the venerable and respected secretary of the Dallas (Texas) Commercial Club, by his confreres in affectionate recognition of his valuable services:

No more will Col. Hunter walk, for friends, who feel for him,
And know the fearful pain incurred by each rheumatic limb,
Have given him an auto car to show the love they feel—
A vehicle whose parts embrace old overshoes and steel.

Down to his work henceforth will ride the Colonel debonair,
The breezes he creates will stir his wildly flowing hair,
And goggles made of bottle glass upon his nose will ride,
While whiskers like a split cascade will float on either side.

And people who appreciate his gentle, harmless soul,
Will dig a hole and climb inside, and then pull in the hole,
For, covering with mighty swoops the streets well paved and wide,
Will come the screaming auto car, the Colonel shrunk inside.

W. M. LETTS, OF LONDON, CLIMBING MT. SNOWDON IN AN OLDS RUNABOUT.

Challenge Cup Races for Auto Boats.

Auto Boat Standard Attains Maximum Speed of 23.68 Miles an Hour in C. Y. C. Races on the Hudson River.

As a result of the races held June 23, 24 and 25, under the auspices of the Columbia Yacht Club, the gold challenge cup of the American Power Boat Association was won by the well-known racing launch *Standard*. The *Standard* showed remarkable form, beating her own record on the first day, and showing a little better speed on each of the two succeeding days. On the return stretch on the third day, against a flood tide and a strong head wind, she covered the distance from the stake boat to the starting line at the rate of 20.59 knots or 23.68 statute miles per hour. As her best previous average speed had been but 20.53 knots or 23.64 miles per hour, it seems altogether likely that the *Standard* has not even yet been put to the limit of her speed possibilities. What this rate of travel means for a launch just under 59 feet long on the water line may be realized from the fact that it is better by .69 of a knot than the speed made by H. H. Rogers's steam yacht *Kanawha*—192 feet water line length—in her victorious contest for the Lysistrata Cup only a week before.

Standard and Water Lily.

The *Standard's* only staying competitor, the *Water Lily*, a 40-horsepower launch entered by Frank Seaman of the Yonkers Corinthian Yacht Club, made average speeds of 18.35, 19.25 and 18.68 miles per hour on the several days, the low average on the first day being due to her striking a floating log and bending the propeller shaft bracket. By hard work all night this damage was repaired in time for the start the next day. Under the allowance given the *Water Lily* by the *Standard* the former lost the race by margins of only a few minutes each time.

The three races were sailed over a course of sixteen nautical miles up the Hudson River and return; the start being off the Columbia Yacht clubhouse and the turn off Piermont. The races were under the management of the executive committee of the A. P. B. A., represented by Messrs. W. H. Ketchum, Anson B. Cole and J. H. McIntosh. The starting and timing at the finish were in the hands of the first two, while Mr. McIntosh, on board the gasoline yacht *Queen Bess*, acted as judge and timer at the turning mark.

Descriptions of the Course.

This portion of the Hudson River averages just about one mile wide, expanding to double this width just above the turn. The tides are strong, and with the Palisades on the west bank and generally high ground on the east bank a wind up or down the river rolls up quite a sea. The start of the first race was made with more than half the flood tide run; so that all the races were on a strong flood tide, with the auto boats on the upward journey and against them on the return. The wind was also up the river on each occasion.

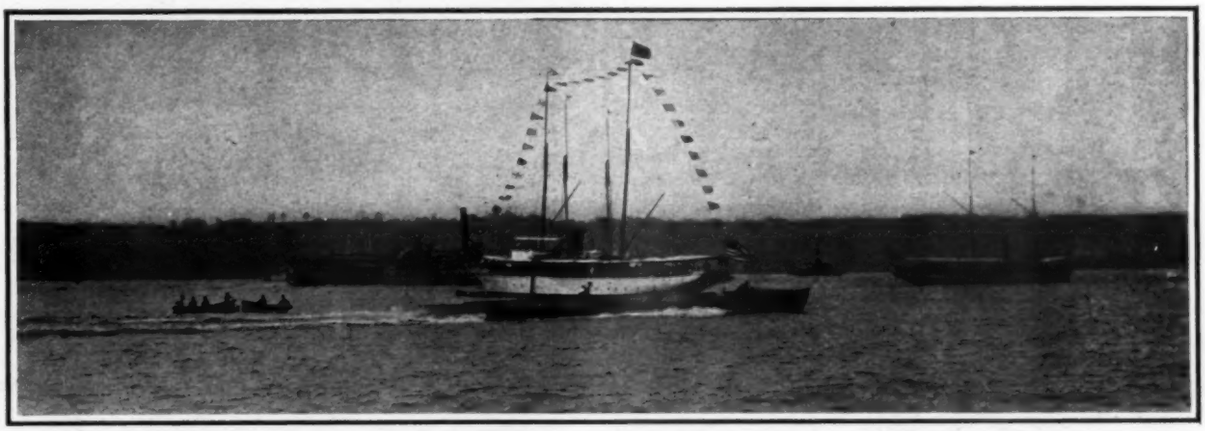
The cup was expected to bring out a very large fleet of the fashionable auto boats of which so much has been printed during the past six months, but in this respect it was a complete failure, only three boats starting in the first race and one of these soon withdrawing permanently. The starters on the first day were:

Boat	Owner	Motor	L.W.L.	H.P.	Rating	Allowance
Standard	E. A. Riotte	Standard	58.90	125.65	79.20	Allows
Water Lily	Frank Seaman	Speedway	43.60	37.20	67.65	17 min. 14 sec.
F. I. A. T. I.	C. H. Tangeman	F.I.A.T.	31.90	35.02	69.03	14 min. 26 sec.

The first day was clear and warm, with a moderate southwest breeze diagonally up the river; there were present a number of steam yachts anchored off the clubhouse and a rather small number of spectators ashore. Among these were some sailing yachtsmen who were out to take the measure of the new sport of auto boating.

The start was made at 3:05 p. m., an hour later than the official announcement specified. Each boat had her owner at the wheel, the *Standard* carrying also C. C. Riotte and an engineer; the *Water Lily* had three all told, and the *Fiat I.* had an engineer, crowded on to the forward thwart beside Mr. Tangeman.

The *Fiat* made a very sharp start, but the *Standard* very quickly overhauled both the others and took the lead, increasing it as long as the three were in sight. After the first few minutes the sport lagged for those on shore and it was some time before the monotony was broken by the return of *Fiat I.* Mr. Tangeman explained that she had struck a floating log, which stove a hole in her and also injured her wheel. The *Standard* rounded the mark at 3:53.40, having averaged 19.72 knots over the first half of the course. At the same time the *Water Lily*, 6 minutes 15 seconds astern, had more than saved her time over the first half of the course. On the way down the head tide and wind told against the shorter and less powerful boat, and the *Standard* finished nearly 23 minutes ahead, winning by 5 minutes 24 seconds, corrected time. Mr. Seaman reported that the *Water Lily* had also struck a log, injuring her wheel, and as it proved, the shaft bracket as well.



AUTO BOAT "STANDARD," WINNING GOLD CHALLENGE CUP OF AMERICAN POWER BOAT ASSOCIATION IN HUDSON RIVER.

The Speedway launch *Alert*, seen in the Columbia Yacht Club regatta of June 11, was present during the afternoon, but with her name removed. She was in company with a newer launch of similar model and dimensions and also named *Alert;* the latter, steered by C. L. Seabury, doing some fast running, though neither was entered.

The weather was again favorable on Friday, there being only a light southerly wind up the river. The start was made as before at 3:05, only the *Standard* and the *Water Lily* being present. The *Standard's* speed up the river, averaging 21.33 knots, represents her highest public performance.

After finishing the 32-mile run she spied Charles R. Flint's steam yacht *Arrow* bound up the river and made out to meet her, running for a couple of miles in close company with that notably fast boat.

RESULT A FOREGONE CONCLUSION.

Though the result was now a foregone conclusion, there was a large party of spectators for the final race on Saturday. The weather was much warmer, but there was a fresh breeze up the river. Before starting the *Standard* was remeasured, on the protest of Mr. Seaman, but the result was not made public. On nearing the markboat Mr. Riotte mistook another anchored boat for it and made the turn, afterward returning and following the correct course at the cost of some little time, the average speed up being less than on the return against wind and tide. The *Standard* finally finished with a lead of 24 minutes, winning by 6 minutes 51 seconds corrected time. The races were scored by points, one for each start made by a competitor and one for each boat defeated; thus the *Standard* scored three on the first day and two on each of the following days, seven in all. The *Water Lily* scored two points on the first day and one on each of the other days, four in all. The complete times of each race, with the average speeds in knots over each half of the course and also over the whole course of 32 nautical miles, are as follows:

SUMMARY OF THE THREE DAYS' AUTO BOAT RACES.

First Race, Thursday, June 23. Start 3-05.

	Outward Course.			Homeward Course.			Whole Course.	
	Turn.	Elapsed.	Knots.	Finish.	Elapsed.	Knots.	Elapsed.	Knots.
Standard	3-53-40	48-40	19.72	4-42-48	49-08	19.54	1-37-48	19.63
Water Lily . . .	3-59-55	54-55	17.48	5-05-26	1-05-31	14.65	2-00-26	15.94
Fiat I withdrew.	. . . . .			. . . . .			. . . .	

Standard wins by 5 minutes 24 seconds, corrected time.
Standard 3 points. Water Lily 2 points.

Second Race, Friday, June 24. Start 3-05.

Standard	3-50-00	45-00	21.33	4-38-30	48-30	19.79	1-33-30	20.35
Water Lily . . .	3-57-30	52-30	18.27	4-59-40	1-02-10	15.43	1-54-40	16.72

Standard wins by 3 minutes 56 seconds, corrected time.
Standard 5 points. Water Lily 2 points.

Third Race, Saturday, June 25. Start 3-05.

Standard	3-52-43	47-43	20.12	4-39-21	46-38	20.59	1-34-21	20.35
Water Lily . . .	4-03-31	58-31	16.51	5-03-26	59-55	16.02	1-58-26	16.22

Standard wins by 6 minutes 51 seconds, corrected time.
Standard 7 points. Water Lily 4 points.

The cup is now held by the *Standard*, subject to challenge on six months' notice, but as a thorough trial of all the new boats of the year is in every way desirable, it is probable that this notice will be waived and another race run later in the season. Though without a competitor of her own class, the *Standard* has made a most creditable showing in these races, running very regularly and evenly, without mishap of any kind, and making an average of over 20 knots, or 23.20 statute miles, for the three races.

PARISIAN boys have, it is said, begun to emulate the American boys in throwing stones at automobiles. A boy recently arrested in Paris for this offence said he hated all automobilists.

PUBLIC CAB FARE REDUCED.

New York Transportation Co. Issues New Schedule for Electric Vehicles.

Electric cabs and other public vehicles have been operated in New York City for a number of years by the New York Transportation Company, and while it was intended that these vehicles should take the place, to some extent, of horse-drawn vehicles, the prices charged prevented any great inroads into the field of the time-honored "hay-motor," the electric brougham remaining largely the conveyance of the comparatively wealthy. Up to the present time the New York Transportation Company has not seen its way clear to reduce its prices to a popular level owing largely to the fact that the business was a new one, comparatively speaking, and the company was spending time and money in perfecting the details incident to the effective and economical handling of a large number of mechanically propelled vehicles.

Believing that most, if not all of these problems have been satisfactorily solved, the New York Transportation Company has drawn up and issued a schedule of rates for electric vehicles which has caused widespread comment and no little astonishment owing to the wholesale reduction of prices.

The mileage rate has been reduced from 50 cents to 40 cents per mile, or fraction, for a single brougham, and 50 cents per mile or fraction for an extension brougham, carrying three or four people. A hansom also costs 50 cents per mile, while the highest mileage rate is that charged for a victoria or surrey—75 cents per mile. The waiting rates are 50 cents per half hour or fraction thereof for any of the above-named vehicles except the hansom, the waiting charge for this being 50 cents per hour or fraction.

The hourly rates, which apply to shopping trips, making calls or other service where there are numerous short stops, are $1 per hour or fraction thereof for single brougham, $1.30 for a hansom or extension brougham, and $2 for a victoria or surrey. This class of rates applies only in the district between Eighty-seventh street and Washington square, including the Christopher street ferry. This covers an area about 5 miles long and over 2 miles wide, and embraces all the principal retail stores and a large and fashionable residential section. If these boundaries are crossed, regular mileage charges are added while the vehicle is out of the prescribed district.

There is, however, an important provision in the new schedule, and one that considerably modifies its scope. The reduced rates will not be in force between the hours of 1 P.M. and 6 P.M., when the old charges will apply. The reason for this is that the company has all the business it can handle, with the present equipment, during that part of the day, and to reduce the rates would simply create a demand which could not be supplied.

Some of the rates for regular trips of various kinds are interesting. For instance, to be taken to the theatre in a hansom, brougham or extension brougham, and brought home again afterward, costs $2.50 as long as the trip is in the district below Seventy-fifth street and above the Christopher street ferry, this section being about 4 1-2 miles long and 2 miles wide. A single brougham can be hired to go to Coney Island and return, about 28 miles altogether, for $10, or a hansom or extension brougham for $12, and the same rates apply to the trip to and from the Morris Park race track, a total distance of 29 1-2 miles, which includes waiting for the conclusion of the races.

Many reasons have influenced the officers of the Transportation Company in its action in this matter, chief of which is the desire to build up an enormous business, paying small but quick profits. The business during the afternoon, when the regular rates are charged, is, as has already been said, almost more than can be handled; but during the morning and evening it is not nearly so lively, and the reduced rates are expected to keep the vehicles busy all the time. There are other reasons as well. The running expenses of plant and vehicles have been largely reduced during the past few years. The tire problem, which at one time seemed likely to swamp the enterprise, has been brought down to a practical basis, and the same is true of the battery. Electric current, of which an enormous quantity is consumed, becomes cheaper per unit the more it is used. And so on, until it becomes evident that the reduction is simply the natural course to take under the circumstances.

A feature that removes one of the extremely disagreeable possibilities of cab hiring is the manner in which the fare is paid and checked. The driver enters in a book the amount received and gives the passenger a duplicate as a receipt. If the passenger is overcharged, he can go to the offices of the company and have the overcharge refunded without the necessity of the wrangling with the driver which is too frequently seen in the street.

Buffalo Club's New Rooms.

Special Correspondence.

BUFFALO, June 27.—The four hundred eighty odd members of the Buffalo Automobile Club now have the incentive of charming clubrooms for their exclusive use to draw them together frequently in social conclave. The new quarters were formally opened a fortnight ago with a smoker and lively entertainment, and they give promise of being largely used by the members every day when they have been completely fitted up.

The rooms are centrally located at 59 Franklin street, only one square from the city hall and two blocks from the business center of the city on Main street. They comprise all of the second floor of the new buff brick two-story building just completed, and occupied by the Centaur Motor Company, in the rear of its Pearl street factory building where Centaur automobiles were formerly built, but which is now used for repair work. The ground floor of the new structure is used as a sales room for several leading makes of cars in the central territory from Syracuse west to Detroit. At the right a broad passage bricked off entirely from the show room gives access to a garage where members may store their cars and have repairs made. A stairway on the left leads to the clubrooms. These consist of one very large assembly room, well lighted from the front and having two large rear windows. At the head of the stairs is a fair sized room for the secretary's office, wash room, coat room, and a retiring room for women.

The rooms are finished in Flemish oak wainscoting half the height of the walls, above which the walls are kalsomined in old rose. The assembly room is liberally furnished in mission style furniture, and the windows are hung with lace curtains. Four or five rich toned rugs of large size partially cover the polished maple floor.

Near the middle of the long side wall is a huge fireplace of light red stone. Between this and the front windows stands an upright piano and in front of the piano is a large reading table covered with the latest issues of all the automobile publications of the country. The members—especially the house committee—are considering the advisability of adding a billiard table, a pantry and cigar stand to be placed in charge of the steward.

But the feature of the rooms that promises to be most popular with the members is the delightful balcony extending halfway across the front of the building. This is roofed over, spread with a rug and furnished with half a dozen rocking chairs. Here on hot days and evenings will be a pleasant place to congregate to smoke and talk, while keeping cool and watching the passing traffic in the street, with the trees and lawns in front of the city hall as a restful background for eyes smarting perhaps from the dust of a day's riding.

LOOKING OUT ON THE BALCONY.

ASSEMBLY ROOM IN THE NEW QUARTERS OF THE BUFFALO AUTOMOBILE CLUB

BUILDING ON FRANKLIN STREET, BUFFALO, IN WHICH CLUB ROOMS ARE LOCATED.

MORE than 1,800 automobiles have been registered with the Connecticut Secretary of State since the license became effective about a year ago.

On the Road to St. Louis—VI.*

Sand Embankment on Turn of New Macadam Road Nearly Causes Disaster—Chicago Automobile Club Hospitality.

Special Correspondence.

PONTIAC, Ill., June 25.—The run from South Bend, Ind., to Chicago, 102 miles, which is scheduled to be made in one day on the St. Louis tour, is easily accomplished. The roads are good and the country level; the only trouble is an occasional patch of sand which requires some careful manipulation to get through. While mentioning sand, let me tell of a little experience we had last Sunday. We made La Porte late Saturday night and spent Sunday there. Finding a clever lot of boys among the automobile enthusiasts of that city, we crowded three of them into *Pathfinder* and set out Sunday evening for Michigan City, Ind., with six persons aboard.

There is a fine macadam road from La Porte to Michigan City, fourteen miles, and had we stuck to it all would have been well, but we took the wrong road and struck sand in the darkness. It was down hill and the automobile, on low speed, ploughed through it for a half mile and then refused to go further. There was power to spare and the rear wheels spun around, throwing sand higher than our heads, but the car stood stationary. We got out and looked around. Sand was everywhere—soft, light sand that had been shifted and piled up by the wind. Then the advantage of having a light car became evident again, for with five of the passengers putting their shoulders to the rear and the lightest man starting the engine, we once more started, this time in the direction of the macadam we had left.

Almost Over a Bank.

The road between the towns of Otis and Durham, and about nine miles west of La Porte, was being "worked." Indiana road making is very different from York State road building. In New York a very firm rock foundation is laid down before any attempt is made at macadamizing. In Indiana crushed stone is simply shoveled into the middle of the road and loose dirt piled up on each side to keep it in place. While running on low speed over a lot of this crushed stone, expecting a puncture at any instant, we came to an unexpected sharp curve in the roadway with a deep ditch on either side.

Our Elmore car is supposed to weigh about 1,200 pounds, but we have it filled with baggage, including a sixty-pound typewriter, many pounds of tools and extra parts, an extra gasoline tank, two hampers filled with luggage, and three tourists, each weighing in the neighborhood of 160 pounds. When this load, aggregating a ton, struck that curve the loose dirt on the outer side gave way and the crushed stone roadbed, the car and its occupants began to slide over the edge of the embankment. Two of us jumped, but the steersman, held in by his wheel and levers, could not do so, and for a full two seconds it looked as though our St. Louis trip would end right there.

With two wheels over the bank and the axles resting on the brink, the car came to a standstill, while a frightened driver crawled out from the off side of the car and surveyed the scene with a sigh of relief. Our first move was to rope the rear wheels securely to a tree on the opposite side of the embankment. Then by united efforts we lifted the front end of the car up into the roadway and tied the front wheels to a tree until we had shifted the rear end. After a careful examination of the engine and running gear we once more moved westward, none the worse for the adventure. Further on we were informed that a team of horses, wagon and two men had gone over the same bank a few days before, both horses and one of the men being badly injured. A stone wall and a guard rail are to be erected at this place soon.

*Continued from Page 686, issue of June 15.

TROUBLE CAUSED BY LOOSE EMBANKMENT NEAR LA PORTE, IND.

Horses Take Fright.

The horses throughout Indiana and Illinois show great fear upon the approach of an automobile and it is claimed that this is due to careless driving on the part of several owners of automobiles residing in the small towns, who consider it the acme of fun to drive a noisy touring car at high speed when passing horses or cattle in the highway, causing runaways and crippling stock all through the section. The damage and trouble caused by these irresponsibles is laid at the door of automobilists in general and all suffer the ill-will of the rural inhabitants as a consequence. There is no Illinois automobile license law, and as the cars do not carry numbers it is impossible to identify the reckless ones.

The exercise of care and consideration when meeting teams along this route means considerable lost time, but the grateful expressions of thanks from the drivers more than compensate for the delays. One old Irishman driving a team of big western horses is remembered in particular. We stopped the car when near him, but the engine was still running and his horses were crowding to one side and getting ready to turn, upset the wagon and bolt. "Will ye stop the noise of it?" asked the driver. We shut off the engine and our friend with the brogue drove up to the *Pathfinder* and stopped to allow his team to smell the automobile. "Now I give ye fellers credit for the civilization ye have. D'ye see that off hoss and the scratches on her back? Well, sure that's where she wint through a barb wire fence day before yisterday upon seeing the likes of a machine liken yours. And d'ye mind that cut on me nose? That's where I wint through the same fence after me mare."

Wanted to See His Picture.

Near the town of Morris, in Illinois, we stopped to take a picture of a bad bridge that had all but ditched the *Pathfinder* and her crew. An old farmer coming along the road was invited to be a feature of the picture, and after carefully parting his hair, dusting off his cowhide boots with a red handkerchief and cracking a smile from ear to ear, he was snapped. When told "That is

all," he inquired: "An did you take the picture?" The affirmative answer promptly brought the demand, "Wall, let me see it." He is still trying to get through his head the reason why he could not see his photograph there and then.

The dog problem has been solved at last after five weeks on the road, during which we sought in vain a means to drive dogs from in front of the car, where they persisted in running and barking, occasionally falling and getting run over. A farm lad shooting at birds with a sling-shot and fine bird shot gave us the happy idea, and the writer is now redeveloping the skill with a sling-shot that he possessed as a schoolboy a decade or more ago.

Chicago Club Extends Courtesies.

A number of automobilists awaited our arrival at Chicago, having followed the cruise of the *Pathfinder* in the papers. We struck the Windy City during the Republican National Convention and the hotels were crowded. The Chicago Automobile Club came to our rescue and insisted that we occupy sleeping quarters in the clubhouse on Michigan avenue.

Pleasant rooms on the second floor were assigned to us and we found the restaurant in the basement well conducted and moderate in prices. Visitors' tickets entitling us to the use of the clubhouse and all privileges for a period of ten days were issued to our party, but we limited our stay in Chicago to two days, running on to Joliet, the city scheduled for the noonday stop of the big run on August 8, the thirty-seven miles being covered easily before dark.

While leaving Chicago over Jackson boulevard, we overtook a gentleman driving a Cadillac, who kindly offered to pilot us out of the city and we followed his lead. A large Newfoundland dog took offense at the foremost car and made a dash for the front wheels. He disappeared for an instant, and when that dog emerged from underneath the rear axle of the Cadillac and scampered yelping to one side of the road where his master was awaiting him, he looked as if he had escaped from a hair-clipping machine, only to pass through a mangler. It's a safe surmise that he will be less impetuous about automobiles in the future.

Illinois Roads Carefully Mapped.

Chicago is planning a big turnout for the St. Louis tour next August, as well as an interesting programme of entertainment for the visitors who arrive there on Saturday night, August 6, and spend Sunday in that city as the guests of the Chicago Automobile Club. Frank X. Mudd, chairman of the local touring committee, has carefully mapped out the roads between Chicago and St. Louis. He furnished us with such explicit information regarding the nature of the country and roads between his city and the exposition, that getting off the trail seemed impossible. Mr. Mudd said that he was giving about two hours a week to his business interests and all the rest of his time to automobile work, the St. Louis tour taking up the greater part of it.

Bridge Approaches Bad.

The roads from fifty miles east of Chicago to Lincoln, Ill., nearly 200 miles south, are almost perfect, and a speed of twenty miles per hour can be kept up all the way by cars of even moderate power. The only trouble encountered on this run is the approaches to bridges. No matter how small the bridge, these are bad. So fearful are the bridge builders of floods—and not without good reason—that they build all bridges from one to four feet higher than the level of the roadways, and the approaches to these bridges are not always properly made. If taken too slowly in an automobile the wheels strike the bridge and the vehicle stops. If taken at high speed the chances are that wheels, tires or springs will suffer. Especial care must be exercised in night running, as the lamps throw a very deceptive light and what looks like a smooth approach to a bridge often causes a bad jolt.

Esteem of Light Car Grows.

In almost every town we pass through we meet automobilists who have followed the trip of the *Pathfinder* from New York City with interest, and our little car attracts more attention than do any of the big ones when we pull up in front of the postoffice or hotel.

"Do you know, since reading the account of your trip I have decided to enter my little car in the St. Louis tour next month," is the final sendoff we get in many places, where the general opinion is that nothing short of a $2,500 automobile with at least 20-horsepower could make such a tour as we have nearly completed. And when we tell them that our bill for repairs thus far has been less than $1, the esteem of the small car goes up with a bound.

Diving for an Auto.

It is not often that the services of a diver are required to put an automobile into commission; but at least one case of this kind is on record, having occurred at New Orleans, La., recently.

A party of three gentlemen and a lady went for a spin in a touring car, driving along a fine shell road that runs from the West End Pleasure Resort to the city. The car was clipping along at a 35-mile gait, so 'tis said, when two of the men, each wanting to steer, got hold of the wheel together. The result was a sudden swerve of the car out of the road, over a five-foot bank, knocking down two heavy posts and a wire fence, and into a canal with a mighty commotion of the ordinarily placid water. The luckless four were rescued by boats and rowed ashore, where they got into a carriage and drove home, quite uninjured.

Next morning Charles U. Kennedy, of the Automobile Company, Limited, hired a schooner and a diver and went to the rescue of the car. The boat was anchored close to the machine, whose position had been marked by lights hung on a stake, and the diver attached hoisting tackle, having to make four trips below to do so. The schooner's derrick then hauled the car out

RESCUING A SUBMERGED AUTOMOBILE.

of its unwonted position and deposited it on the shore, where it was subjected to the additional humiliation of being towed to the station by a mule team. The machine suffered no serious injury beyond the warping of the woodwork and the damage to the upholstering, and is now on the road again—this time, it is safe to assert, in charge of one man at a time.

An automobile exhibition has been suggested as an attractive feature for the annual fair to be held August 30 to September 1, inclusive, at Brandywine Springs Park, four miles from Wilmington, Del., under the auspices of the Pomona Grange of New Castle County. The fair is to be a State event this year, instead of simply for the county, and elaborate plans are being laid to make it larger and more attractive than ever. It is estimated that with fair weather

HUMILIATION OF NEW ORLEANS AUTO.

the attendance will reach 150,000, people coming from all parts of the State and from Pennsylvania, Maryland and New Jersey, and in view of its wide scope especial interest is being taken this year in the mechanical features.

HINTS ON OPERATING A RUNABOUT.

When starting out for a run take a glance over the various parts of your car, even though you know positively that the machine is in good mechanical condition.

See that your tires are all standing up. A nail or other sharp-pointed object might puncture and deflate a tire without your noticing it. Also see that the caps are screwed on the valves. It is easy to forget them when pumping up tires.

See that you have shut off all drain cocks in the water, gasoline and oil systems, so that you will not distribute your supplies along the road as you travel. Also be sure that such cocks are tight enough to stay closed notwithstanding the vibration of the machine and the occasional rough jolts it is pretty sure to receive.

See that the porcelain in your spark plug is not cracked, and that you have a spare plug or two along, or at least an extra porcelain.

See that you have replenished the tire repair box with rubber solution and tape which you used up during the last trip. A tire repair outfit without puncture solution and tape is about as useless as a tire without air.

See that you take your starting crank along, if it is of the detachable kind. This advice may seem a little superfluous, but if you ever witness the desperate struggles of a man trying to start his motor with a monkey-wrench you will value it at its true worth.

Do not use gasoline that has been subject to evaporation for a long time, or what is called stale gasoline. It will not work satisfactorily.

* * *

If you think there is any leak anywhere in your gasoline system, find it and repair it at once; but do not go hunting for it with a match, or candle, or open flame of any kind. If you do this, and there is a leak, you will run a good chance of finding it prematurely and at the same time setting the machine on fire. The best light for this purpose, or, in fact, for any work in the immediate vicinity of the machine, is an electric lamp of some sort. If you have your automobile house fitted with electric lights the proper thing to use is a lamp on an extension cord. If not, about the handiest thing for lighting up corners is a little battery lamp, which can be worked from a set of dry cells. For road work such a lamp may be worked from the ignition cells; but this is not advisable, as it is very hard on the batteries. It will be found better to carry one of the convenient pocket electric lamps, of which many are on the market. One of these lamps, with reflector and lens, will be found most useful, and extra batteries, to be used when the original ones are exhausted, are inexpensive and can be carried very easily.

The statement is frequently heard that the useful life of a car, especially a small car, such as a runabout, is one, or at most, two seasons. There is no reason why this should be the case, and, as a matter of fact, any well made car will last for a much greater period if it is properly taken care of and repairs and renewals made when necessary. It is all in the manner in which the machine is treated—barring bad smashes, of course—and there are many small cars running to-day, and running well, that have been in active service for four or five years, and even more.

* * *

A very good way to keep tires in good condition is to carefully fill up cuts with rubber solution and bind them with tire tape until the cement has thoroughly set. Bits of stone or dirt will enter even small cuts and enlarge them, and prepare a soft spot for a puncture, as well as admitting water to the fabric of the tire. If the machine is not to be used for a considerable time, as, for instance, when laying up for the winter, take the weight off the tires by means of jacking, blocking or any other convenient method, and you will avoid considerable injury to them.

* * *

As a nail will often pierce a tire and remain in it, temporarily preventing leakage of air, tires should be examined frequently for injuries of this kind. A tire may suddenly "fizz" and go flat owing to the loosening of a nail picked up on a previous run. A nail is also apt to injure the parts of the tire adjoining the original puncture. A rather curious case of this kind occurred when a 3 1-2 inch tire was punctured by a horse-shoe nail. The nail went through the tire at the tread, and as the tire began to deflate it punched about a dozen small holes on the opposite side of the inner tube and finally got a blow strong enough to send it clear through to the steel rim, upon which it bent over, hooking itself between the rim and tire in such a way that considerable difficulty was experienced in getting it out. When found the nail was inside the tire, the head having pulled through the tread when the point became clinched.

* * *

In descending long hills where brakes are apt to become much heated, or if for any reason it is desired to relieve the brakes, the speed of the car may be checked by letting it coast with the low gear engaged and the spark shut off. Many cars may be started on a down grade in the following manner: Release the brake, and as soon as the car has required a little momentum throw in the high speed clutch, passing quickly through the low gear. Have your spark set as for starting with a crank, and the motor ought to start up promptly. If neatly done this makes quite a "grand-stand play" and looks very mystifying to one who is not "in the know." If the motor is cold it will have to be primed, just as in starting with the crank.

* * *

In attacking a steep grade, go at it on the high speed, and as soon as the motor becomes overloaded and slows down, change quickly to the low gear. This is much pleasanter than throwing in the low gear at once, and a good deal of time may be saved, especially if there are many hills to be climbed. But do not wait too long before changing, and do not let the car start backward, as, if the hill is very steep, the motor may be stopped by the sudden strain, which is not good far the car in any case. Make the change while the car still has enough momentum to give the gear a chance to take hold.

* * *

The following method of applying asbestos gaskets is sometimes adopted by repair men, and with good results. The gasket is soaked in strong brine, the surfaces of the joint brightened and the wet gasket put on and tightened down. The salt causes a film of rust to form on the clean metal surfaces, which causes the gasket to adhere strongly. While this method is hardly as mechanical as it might be, still it answers very well. Of course, the breaking of the joint means the destruction of the gasket, whereas a gasket put on with graphite on one side and red lead on the other, if carefully handled, stands several removals, especially if the gasket is made of the copper wire gauze and asbestos combination.

* * *

It is not necessary to prime a hot motor. In fact, if you do you will have to work out the over-rich gas with the starting crank. The mixture will be too rich to ignite, and you cannot get an explosion until it is reduced to the proper proportion.

* * *

Do not try to economize in batteries by using old cells with new ones. The weak cells will reduce the strength of the current, so that the battery will work almost as if it was composed entirely of old cells. If you have two sets of cells, and have pretty well used up both, you may help matters along by wiring both sets together; but when you get to this point it is high time to put in new batteries all around.

* * *

Lubricating oil frequently contains impurities that clog pipes and oil-ducts and reduce the supply of oil. Therefore, it is a good thing to strain your oil through cheesecloth. By straining gasoline through chamois, oil through cheesecloth and taking care that water is clean, you will be in a position to know that trouble from these sources is not likely to occur.

The Vanderbilt Cup.

The challenge trophy offered as a prize for the William K. Vanderbilt, Jr., cup race has just been completed by Tiffany & Co., of New York, and has been placed upon exhibition for a few days in their Union Square store. This massive silver trophy is classical in form, as shown by the accompanying reproduction from a photograph. The ornamentation is simple, consisting of a laurel wreath encircling the brim to signify success and a fine portrait in bas relief on one side of Mr. Vanderbilt in his 90-horsepower Mercedes at Ormond Beach. On the opposite side is engraved the following:

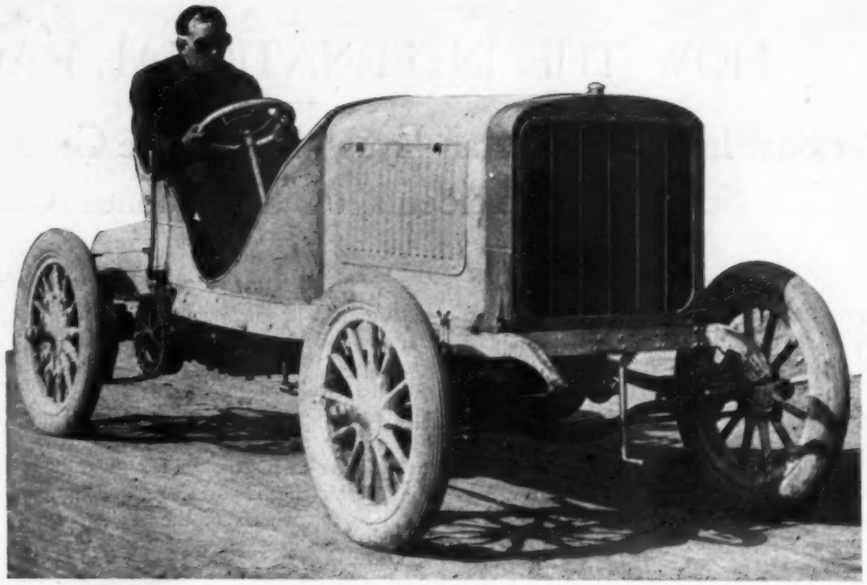
"Challenge Cup Presented by W. K. Vanderbilt, Jr., to the American Automobile Association, under deed of gift, to be raced for yearly by cars under 1000 Kilos. Won by ————————."

VANDERBILT SILVER CHALLENGE TROPHY.

The cup stands 31 inches high, including the wood base, and has a capacity of 10 1-2 gallons. The bowl contains 481 ounces of sterling silver.

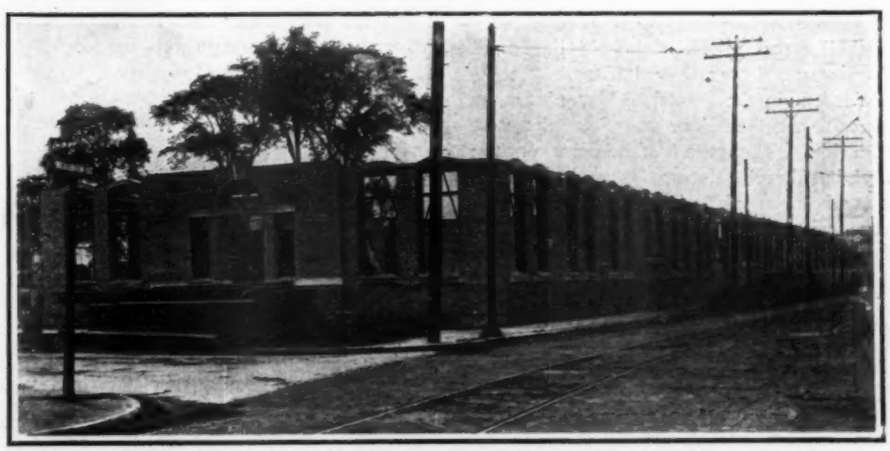
Pope-Toledo Racer.

Additional information regarding the Pope-Toledo 60-horsepower 4-cylinder gasoline racer, which will be a candidate for the Vanderbilt cup, indicates that in its general features the car partakes largely of the design of the Pope-Toledo 24-horsepower touring car. The motor, however, is of course much larger, the cylinders having a bore of six inches and a seven-inch stroke. The normal speed is 1,200 revolutions per minute. The intake valves are automatic, and the cylinders are jacketed with copper. The engine lugs are bolted directly to the side members of the channel steel frame, which is bent inward at the front. The makers state that the transmission is the same as that used in the Pope-Toledo touring cars, "giving three speeds forward and reverse." Just how the changes of speed are made is not apparent, as no control lever is visible in the accompanying photograph. The cone clutch is of aluminum. Axles, spring-hangers and other parts subject to great strain are made of nickel steel. Outside chain drive is employed. Wheels are 34 inches rear and 32 inches front, with 4-inch special racing tires. A slight pressure is maintained in the fuel tank to insure a regular flow of gasoline to the carbureter, which is of the regular Pope-Toledo construction, enlarged to meet the demands of the larger motor. The car is equipped with a muffler and is said to be very quiet in operation, and to have a control on the high gear by which speed can be cut down by throttle to "eight or ten miles an hour." The speed on the high gear is normally 76 miles an hour. The wheel base is 11 feet, and the car is lighter than the touring car by 200 pounds. O. F. Weber, of the firm of O. F. Weber & Co., Chicago, is the owner of this new racer, it having been built to his order.



O. F. WEBER'S NEW POPE-TOLEDO 60-HORSEPOWER VANDERBILT CUP RACER.

THE signal corps of the U. S. Army, Department of California, is to employ automobiles. Major Parker W. West, aide-de-camp of General Arthur McArthur, has been ordered by General A. W. Greeley, chief of the signal corps, to purchase two cars in San Francisco.



Ground was broken less than a month ago at Beaubien and Piquette streets, on the northwestern outskirts of Detroit, for a new factory building for the Ford Motor Company. Already the structure has reached the stage of construction shown in the above picture, which shows the first of the three stories called for by the plans. The building is 400 feet long and 50 feet wide. The rear end abuts upon the Lake Shore & Michigan Southern Railroad, so that the company will have excellent shipping facilities. With such a narrow structure, it is evident that all departments of the plant will be well lighted. The plant will be completed in August and manufacturing operations for the season of 1905 will begin in it this fall.

HOW THE INTERNATIONAL RACE WAS RUN.

Personal Impressions of an Eyewitness of the Gordon Bennett Cup Contest—Scenes and Incidents on the Taunus Course in Germany.

BY OUR SPECIAL CORRESPONDENT, RENE M. PETARD.

SAALBURG, June 17.—It is now six o'clock in the morning, and soldiers are guarding the entrance to the enclosure and no one is able to get in. All the press representatives are complaining. The employees of the German Automobile Club are being given their final instructions. There are soldiers everywhere and many are complaining that the organization was made more for the convenience of the organizers than for that of the public. The grand stands are filling very slowly.

An hour later Jenatzy is cranking for the start, which takes place 200 yards from the starting line between the stands. As he crosses the starting line at high speed his time is taken. All the drivers are standing around the line awaiting their turn to go. Edge and Jarrott have forgotten the rivalry between the Wolseley and Napier and are conversing in a friendly way. Jenatzy has disappeared. His Mercedes started smoothly without strain on the tires and fourth speed was thrown in within 100 yards of the starting line.

"Hello, old chap; don't get hurt; we can't spare you," calls an English photographer to Jarrott, who replies: "Hope to get through all right; thanks." A comforting greeting.

Edge is now on the line and seems to be calm. His engine does not sound as fast as Jenatzy's; it is very puffy, and the regulator seems too sensitive; apparently the car will have to run all the time on the accelerator. The noise sounds very much like that made by the old Panhards. Edge starts slower than Jenatzy.

Warden, in the Austrian Mercedes, now comes to the line. The start is at the crest of a hill. The grand stands are on the level, but there is a steep descent beyond the ends of the stands, where an accident took place yesterday. Between the start and the stands there is a very slight turn to the right—not enough to interfere, however, with a full view up to the top of the descent. Warden started well on the second speed and jammed in the fourth at the 100-yard mark without passing through the third speed. He started better than Edge, but had difficulty in adjusting his spark.

An amusing sight is that of the bugler waiting for the starting of each car with the trumpet to his mouth for the full five minutes, his cheeks puffed out and his eyes glued to the wheels of the car so as not to miss the start.

The Italian driver Cagno, who is at the starting line in his F. I. A. T. car, turns the crank about a dozen times before getting a spark out of the magneto. His engine is remarkably smooth running, the smoothest of the first four starters, in fact. He fails to use the accelerator before getting away and as a consequence makes a very slow start—slower than Edge.

Théry is now on the line with his 80-horsepower Richard Brasier. He looks as happy as if he were sitting down to a good dinner—a picture of perfect bliss. M. Michelin watches with affection the car which he expects to bring him lots of advertising for his famous tires. The engine is running at very high speed and very smoothly. Always smiling, Théry tightens the tire bolts for the last time. Now he is off. He does not smile any more. There is a nasty noise in the gears as he changes speed, but the car picks up fastest of all.

The Pipe Belgian car, No. 6, driven by Baron de Crawhez, instead of Hautvast, who took the Baron's car, now comes to the line. The driver and mechanic seem rather nervous, although both are smoking. The engine seems hard to start. There are many handshakes and last words of advice to the driver and mechanic, who appear to be very popular or to have brought all their friends to the race. The start is slow, almost false, but the car gets away at fair speed. The springs seem too elastic, as the car rocks a great deal lengthwise as it disappears.

Defaux, in the 90-horsepower Defaux Swiss car, does not start, for reasons explained elsewhere. Baron de Caters was the next to come to the line with his 90-horsepower German Mercedes. It is noticed that all of the German cars have clips on the springs holding the two longer leaves together. De Caters' engine is hard to start. It is very noisy and stops. Anxiety is written on all faces, including the driver's. The trouble is with the ignition. This is fixed up, although in a very hasty and crude way. When the engine starts again it runs with a great deal of vibration and stops. Now the word for the start has been given. The bonnet is opened and the engine started again. The driver has become much excited. The mechanic fumbles awkwardly and accidentally stops the engine for the third time. Then De Caters gets out and cranks the motor himself, but it is impossible to start and there are no explosions. The machine is backed out of line and it is explained that the trouble is lack of pressure on the fuel feed tank.

Next comes to the line S. Girling, in the 72-horsepower Wolseley. The engine is running well and the silencer is cut off. There is considerable vibration, notwithstanding the engine is horizontal. Girling makes a very good start. Now the engine of De Caters' Mercedes is heard starting 200 yards below the starting line, then stopping. This is repeated several times and the car comes a little way up the hill and stops again. Decidedly there is fuel feed trouble.

Werner, of the Austrian team, comes to the starting point in his 90-horsepower Mercedes, cracking jokes with his friends. His engine runs smoothly and very regularly and he makes a fair start. De Caters finally gets off and now passes at fine speed, receiving many cheers. His car seems to run all right, but he lost 14:29 as the result of his feed troubles.

The F. I. A. T. Italian challenger, No. 11, now comes to the start with an engine that is not so quiet as that of the other F. I. A. T. and with a very excited Italian

STARTERS IN THE RACE, COUNTRIES AND CARS THEY REPRESENT, AND ORDER OF DEPARTURE.

GERMANY.

No. 1 Jenatzy, 90 H. P. Mercedes.
No. 8 De Caters, 90 H. P. Mercedes.
No. 14 Opel, 80 H. P. Opel-Darracq.

ITALY.

No. 4 Cagno, 65 H. P. Fiat.
No. 11 Storero, 65 H. P. Fiat.
No. 17 Lancia, 65 H. P. Fiat.

FRANCE.

No. 5. Théry, 80 H. P. Richard-Brasier.
No. 12 Salleron, 100 H. P. Mors.
No. 18 Rougier, 100 H. P. Turcat-Mery.

AUSTRIA.

No. 3 Warden, 90 H. P. Mercedes.
No. 10 Werner, 90 H. P. Mercedes.
No. 16 Braun, 90 H. P. Mercedes.

ENGLAND.

No. 2 Edge, 80 H. P. Napier.
No. 9 Girling, 72 H. P. Wolseley.
No. 15 Jarrott, 96 H. P. Wolseley.

BELGIUM.

No. 6 De Crawhez, 60 H. P. Pipe.
No. 13 Augieres, 60 H. P. Pipe.
No. 19 Hautvast, 60 H. P. Pipe.

driver, Storero. The start is slow, the F. I. A. T. machines seeming to be slow in picking up speed and difficult to get under way.

Salleron, of the French team, appears nervous as he comes to the start in his 100-horsepower Mors, No. 12. Many friends shake his hand before he starts and wish him good fortune. His engine runs well and the explosions are very regular. There is slight vibration. He makes a good start. Now the dust is beginning to rise and there is lots of smoke from the burning oil. Many spectators predict that Salleron will be among the first three to finish.

Happiness is written all over the face of Augieres, of the Belgian team, as he comes up for the start in his 60-horsepower Pipe, No. 13. The Belgian drivers do not seem excited; they say they are not looking so much for the cup as a good reliability showing and do not intend to break their necks. The engine is started from the seat within any reasonable time after the engine has been turned over to draw in its charge of gas and compress it. By this means the drivers expect to save a good deal of time when starting at controls. Augieres makes a very poor start, however, getting away slowly, like a touring car.

Opel, of the German team, appears much disconcerted as he comes to the line in the Opel-Darracq 80-horsepower car, No. 14, and stares steadily at the foot of his steering post, not knowing where else to look. The bonnet doors and accessories have been removed to reduce the car to the weight limit. The machine looks dirty and heavy and not like a winner.

A four-leaf clover cut out of sheet iron is fastened on the bonnet of Jarrott's 96-horsepower Wolseley, which now comes to the line. This is for good luck. Jarrott is in a happy frame of mind and takes things unconcernedly. He has been standing around since the beginning of the race chatting and joking with his friends. The wheels of his car are stiffened laterally by wire spokes from the outer ends of the hubs. His mechanic is built like a jockey and is wearing two pairs of goggles. The engine starts easily, but there is much vibration. Jarrott's engine runs better, however, than Girling's in the other Wolseley. He makes a beautiful start, almost running over the starter.

The Austrian driver, Braun, in his 90-horsepower Mercedes, looks like a monk, dressed all in brown. He goes to the line quite confident and satisfied. He is the most silent of all who have yet started. He did not speak two words. His engine runs beautifully. He shakes hands before his departure. His mechanic looks as unhappy as the driver does pleased. The start is bad. The car picks up speed rapidly, but slows down as the high speeds are thrown in.

Lancia, on the Italian F. I. A. T., No. 17, comes to the start resigned to die, judging by his expression. Evidently he is prepared for the worst. Several flies and wasps are caught in the radiator, jammed there by the rush of air against the car moving at high speed. The engine runs quietly. Lancia himself takes charge of the horn. He is the only one of the drivers who does so. He makes an exceedingly slow start, but a regular one.

The most self-possessed driver of all is Rougier, of the French team, as he prepares for the start in his 90-horsepower Turcat-Mery. Clearly he is used to the business. While waiting to get away he talks of his previous racing experiences. His engine is noisy, but has a powerful, deep sound—more of a roar than a rattling noise. He makes a fine, smooth start, fairly fast, and picks up speed very quickly.

Hautvast, who took Baron De Crawhez's place in the Belgium car, No. 19, wears the same expression of quiet and "sang froid" as De Crawhez and Augieres in the other Pipe cars. He makes a better start than either of his team mates.

The substitute Wolseley car, No. 20, comes to the line after No. 19, the last of the racers, has departed and the driver wants to run the race unofficially "for fun." He is ignored until a big German officer, at the request of the race officials, does a lot of swearing and almost pushes the car off onto a side road.

The car left at the following times, in order of number: 7, 7:07, 7:14, 7:21, 7:28, 7:35, 7:42, 7:49, 7:56, 8:03, 8:10, 8:17, 8:24, 8:31, 8:38, 8:45, 8:52, 8:59.

Jenatzy has just passed, having made his first turn in 1:26:56, soon followed by Edge in 1:31:44. It is likely that neither had any involuntary stop. We consequently think that England's best is out of it, if mere speed counts. It is well known that Napier cars are very hard on tires, and that English tires are not as good as the French, although it is necessary for the English to follow the rules of the race, and use their own make.

At the start it was noticeable that most of the drivers saluted the Kaiser while passing, although at full speed. Some of them went even so far as putting on the muffler, or what was supposed to be it, when passing before the grand stand. Salleron instead sent a little oil into his engine, which instantly changed into a blue cloud of the most nauseous character.

Théry just passed in beautiful shape, having made his turn in 1:26:57, one second more than Jenatzy. This is most encouraging for the friends of the French team, as when considered the regularity his engine showed in the previous contest and his skill as a driver, he is thought to stand a better chance than Jenatzy, as he has a lighter and more handy car of equal speed. Unless bad luck in tires turns up he will more than likely warm up to the work and his following turns are expected to be faster.

Warden passed next in 1:58:41. He is not remarkable neither in speed nor in fine driving, and does hardly stand any chance unless luck comes in. This also was the impression made by Cagno, whose time was 1:54:58.

Girling just passed in splendid shape, but rocking most awfully lengthwise and going very jerkily, the horizontal engine for such powers and speed seeming to be inferior to the vertical in general balance. His time was 1:32:55, very favorably comparing with Edge's. Will Jarrott do better on the same make of car? is the query. Next to follow was De Caters on the German Mercedes. His time, 1:43:15, is very satisfactory if the delay which he experienced in starting is taken into account. However, with cars as closely matched as the best of the cars entered seem to be, this is a pretty dangerous handicap.

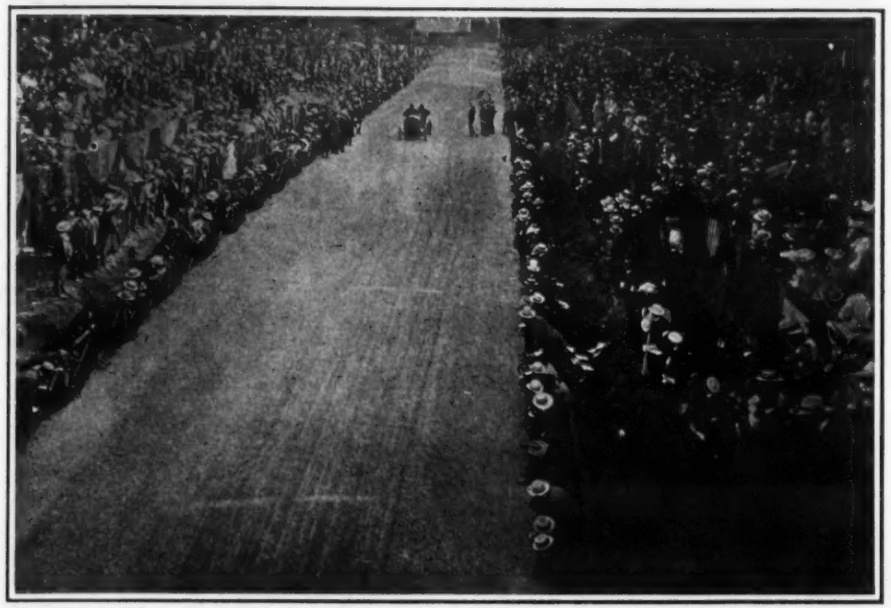
Great cheering marks the passage of Salleron on his Mors, he saluting some friends at his passage. His machine is running beautifully and with great regularity and steadiness. Time, 1:36:53.

Braun passed shortly after, having been just passed by Salleron. He was most anxious to get again ahead of the latter and flew past the grand stand probably faster than any other competitor. It was simply fearful the way in which he started down the hill. His car positively left the ground at the top in a leap, such was the momentum he had acquired on the level. His time was 1:56:53. Following, completing their first round, and without any special feature, came:

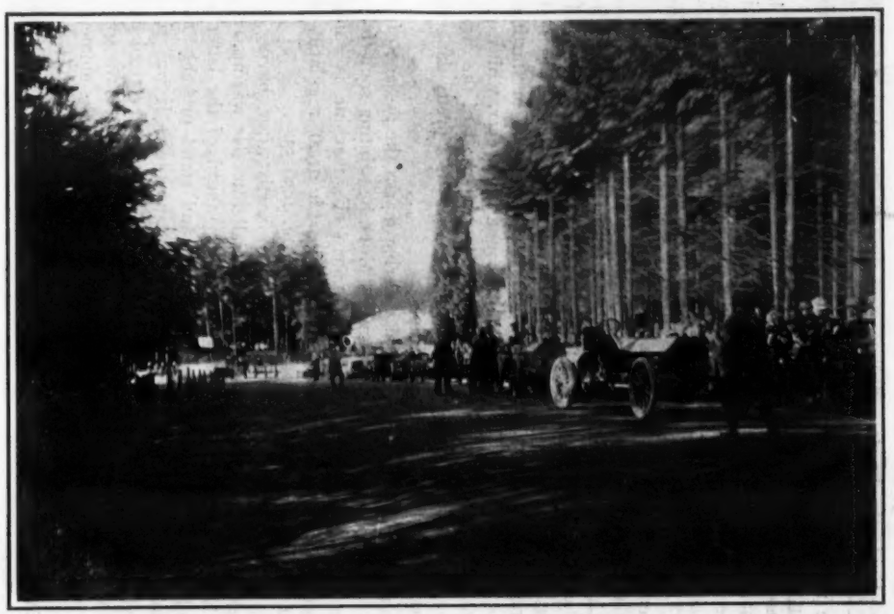
Cagno (Fiat)	in 1:54:57
De Crawhez (Pipe)	in 1:28:32
Jarrott (Wolseley)	in 1:35:18
Storero (Fiat)	in 1:42:24
Hautvast (Pipe)	in 1:46:47
Augières (Pipe)	in 2:23:07
Warden (Aust. Mercedes)	in 2:07:14
Rougier (Turcat-Mery)	in 2:06:24

Thus we find the only car having given up the first round is the Opel Darracq, thus proving once more, after the French and English trials, in which cars by the same engineer and of the same pattern were entered, that the 1904 Darracq racing design is unsuitable for the strains of long-distance road racing.

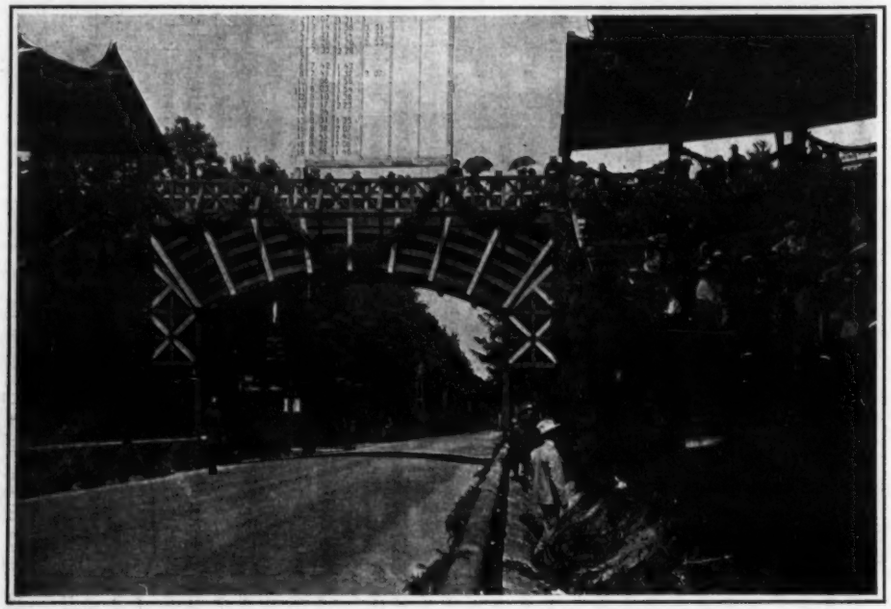
Jenatzy passed first on the second round in 2:55:29. As far as one can judge of the speed at which the racers pass he seemed rather tired, but, however, was keeping a very good pace. It is to be believed by the spectators that his first turn will be his fastest unless his mechanic can encourage him on passing the line for the third time by telling him that Théry, who followed him rather closely, had completed the second round in 2:53:49, beating him by almost two minutes. Théry consequently passed second on the second turn, although having made the best time. Jenatzy's lead over Théry is still more than 26 minutes gross time, so that it may be possible that Théry wins the race without overtaking Jenatzy. The third to pass was Girling, on his Wolseley, in 3:07:21, such



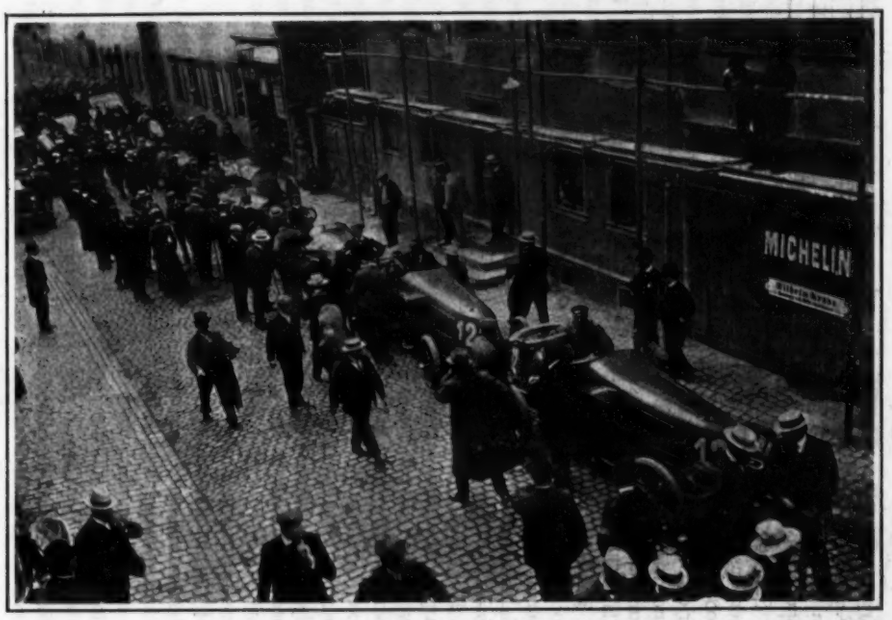
Looking Up the Course at the Moment Thery Won the Race for France.



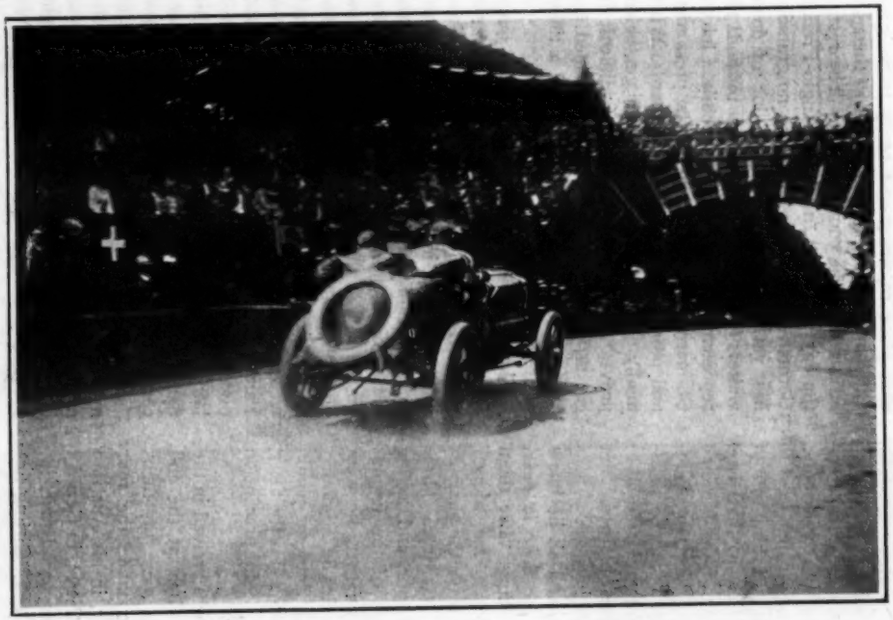
Machines in Line Waiting Their Turn to Start in the Race.



Time-Keeper's Board on Bridge Connecting Grand Stands at the Saalburg.



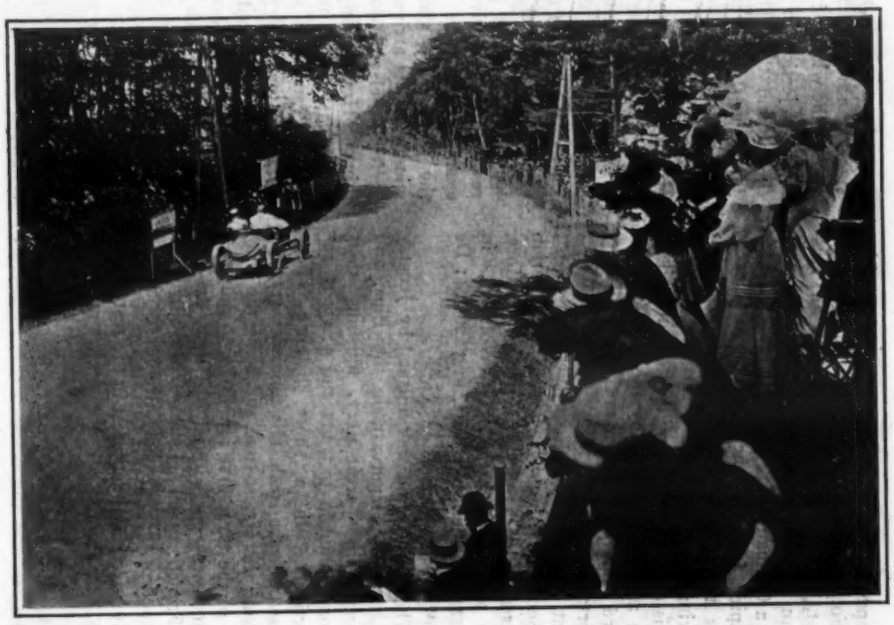
Cars Ready for Weighing In at Homburg the Day Before the Race.



Thery, the Winner, Passing the Grand Stand on the First Round.

Emperor William and Escort Leaving the Enclosure at the Saalburg for Luncheon.

First at the Starting Line—Jenatzy's Mechanician Cranking the Mercedes Car.



Contestant Taking a Corner at High Speed. Note Temporary Fences Along Roadside.

INSTANTANEOUS PHOTOGRAPHS OF STRIKING AND INTERESTING INCIDENTS CONNECTED WITH THE 1904 GORDON BENNETT CUP RACE MEETING ON THE TAUNUS COURSE IN GERMANY.

a speed being quite unexpected from him.

Following in order were: Lancia, on a Fiat, in 3:37:03; Werner, on an Austrian Mercedes, in 3:51:29; De Caters, on a German Mercedes, in 3:32:52. Edge's Napier followed the latter quite closely, less than 50 feet away, the English car having made the two first turns in 4:07:54. This chase creates some excitement, and all are anxious to know by the result of the third round whether or not Edge will have overtaken his rival, whose fame as a driver is at least equal to his own.

Soon these go by: Braun, in Austrian Mercedes, in 3:38:04; Salleron, in Mors, in 3:40:44; Jarrott, in Wolseley, in 3:32:51; Sterero, in Fiat, in 3:26:44; De Crawhez, in Pipe, in 3:51:29.

The third round was finished by Jenatzy in 4:33:15. Hautvast, in the Pipe, and Rougier, in Turcat-Mery, finishing their second round in 3:31:11 and 3:43:24, respectively. In a short distance Théry passed, always fresh. His time was 4:23:40, making the fastest time and being the winner of the three first rounds by 10 minutes. If he keeps up, without bad luck, the cup is French again. Jenatzy, his only real competitor, being visibly tired.

By 3 o'clock the interest in the rest of the race has dropped a great deal, as a wide space of time now separates the cars in two classes. The superior cars have a good chance to win and between them, although there are ten minutes interval, one cannot well tell which will win, so great is the part played by luck in such contests. The other class, now far behind, consists of the lower grade cars and drivers, sometimes handicapped by luck, sometimes by internal construction or lack of daring. No cars are seen for a very long interval.

At last Lancia in a Fiat comes in 5:25:35 for the three first rounds. He is soon followed by De Caters, in the second Mercedes, who made the run in 5:06:25 and starts on his last turn well anxious to finish in fair rank. The mass of the less lucky cars seems to come in now. Edge appears ending his third round in a mad rush and going on his fourth with more speed than ever. A last desperate hope seems to have taken possession of all late cars on the course, as what cars pass go by much faster than in previous rounds. Werner passed closely after Edge, in 5:45:25. Then, a long while after, Girling's machine seems to go painfully, so to speak, while Braun follows less than a hundred yards behind, going beautifully on his Austrian Mercedes, their times being respectively 5:23:15 and 5:16:33.

Then, when all were anxious to know who would at last win this awful speed duel, Jentazy appeared, all German onlookers shouting *Erste*, in a tremendous voice of triumph. The glorious winner of last year's cup made his run in 6:01:28, slightly better than had been expected. Then Jarrott put in an appearance where all expected to see Théry. The happy English driver seemed to enjoy thoroughly his last race, since he said that this is his last appearance at the wheel of a racing car.

The dejection of the French side when they found that Théry had changed into Jarrott was, however, not very lasting, as it was soon announced that a new car was coming. This soon turned out to be Théry. His time was 5:50:03, more than 10 minutes better than Jenatzy. He had started at 7:28 a.m. A tremendous cheer then saluted the winner of the day.

I had the luck of escaping the careful eye of a German soldier, and, jumping over the fence, was able to steal into the grounds reserved for the drivers on their arrival. My example was soon followed, and we had the pleasure of greeting first the French winner on his arrival. To say that he was perfectly clean would be exaggerating things. He was very dirty, indeed, and so was Jenatzy, who, in a very sportsmanlike manner, came and shook hands with him, congratulating Théry on his success.

That the defeated man was genuine in his greeting I am certain of. A man's face does not lie in such circumstances, and no one found a smile even when it could be seen that after having left the winner the noble Belgian could hardly keep his tears at the thought that he had lost his glorious trophy.

I had then the honor of shaking the thumbless hand of the great driver, and of telling him in two words what I felt: *Bien couru*, well run.

Théry having received Jenatzy's greeting, was carried more than led by the crowd waiting for him at the end of the racers' quarters to the rear of the Kasier's tribune. Having been first of the newspaper men to greet him, and having helped him out of his car, I was at his left arm at that time. When we reached the rear of the Kasier's box the president of the German Automobile Club came out and beckoned negatively, meaning that the Emperor refused to see the winner. Théry personally did not seem to care anything about it. He was filthy, dirty, greasy, dusty, and all he knew how to say was: *Qu'on me fiche la paix*, which means in French slang, "Let them chase themselves and leave me alone." Jenatzy was then about to leave the quarters so I went to greet him a last time. Three cheers were given in his honor, and, taking on board M. Tampier, son of the famous timer and assistant to his father, he went away behind the Roman ruins in Saalburg, where it was said that the Emperor would greet him. Théry also went shortly after, although he had taken the useful precaution of washing before leaving.

After the leaders the others arrived in the following order: De Crawhez, at the end of his third round, who gave up then; Lancia, on his Fiat, who made the four rounds in 7:17:54; Werner, in his Austrian Mercedes, in 7:32:14; De Caters, in German Mercedes, in 6:46:31—a very good race, indeed, considering his bad luck. Girling finished in his Wolseley in 7:22:54, and Braun, in Austrian Mercedes, in 6:59:49.

All these times given here for the cars are the times as supplied by M. Tampier, in quick figuring. They are subject to slight alterations, as they take the time spent in the controls as 56 minutes, which is the time settled by the regulations of the German club; but this time may vary for the different competitors, although very slightly.

Before the Race.

HOMBURG, June 16.—Probably there is nothing in the world better calculated to increase one's love for glorious sport and to transform that love into the keenest enthusiasm than to witness the supreme effort made by several great nations, all striving for the leadership in a young but immense industry, to acquire a trophy of no intrinsic value when compared to the amount expended to win it, but the possession of which indicates almost certainly which is the best of the motor car builders of the world.

Although the race is yet to be run, pages and pages might be written on the 1904 Gordon Bennett race and the preparations made for it. However, space forbids.

Arriving late Monday night in Frankfort, the writer had great difficulty in securing lodging at a hotel at which the proprietor was willing to take a guest without a mortgage on his future. An early journey to Homburg the following morning found that place rejoicing and ready to welcome (at shameless prices) the lovers of the sport attracted by the coming event. The rest of the day was spent in talking Anglo-French-German—a language for which no grammar has yet been written—to a lot of dense waiters and others in order to find the representative of the Automobile Club of Germany, who has charge of the press men, and more especially the press cards. When finally located, however, this gentleman proved as agreeable as he was difficult to get at, and very courteously provided the writer a place in the enclosure and a ticket of free circulation everywhere.

The next move was to find suitable quarters in Homburg, if possible, at a price within the reach of ordinary mortals. Having succeeded in this search, I returned to the station and got my faithful old motor cycle. You should have seen the expression on the face of the boniface when he saw me push the machine into his courtyard. Disappointment, regret and ill-concealed anger were written in it. Then I understood my Paris friend's advice that no man who owned anything on wheels, from a perambulator to an automobile, should show his machine before arranging the price of accommodation, unless he were a millionaire.

Early Thursday morning the writer made a run over the race course on the motor cycle. It was found that the course is at the same time a most beautiful and probably the most hilly and sinuous course

that could be found. The scenery is wildly magnificent, with majestic hills rising on both sides and dense woods bordering close upon the road in many places. But there is hardly a level or straight stretch in the entire course and very few places where the most powerful cars will be able to show their full speed capabilities. This explains why the average speed expected to be made in the race is so low.

Although the hills will considerably decrease the average speed, they offer no real dangers in themselves. The danger to the contestants lies in the many sharp turns, most of them being of such a nature that the driver cannot see the road beyond the turn until he is fully upon the curve.

An accident occurred to-day within a mile of the starting point, on a steep descent at one of the sharp turns. A touring car, leaving Saalburg, was descending the hill at a lively rate and did not slow up to take a curve half way down the hill, and the car capsized. The chauffeur had to be taken to the hospital for treatment for concussion of the brain.

A curve which the Germans appeared to fancy very much is the double or S-shape curve—the greatest possible nuisance to th motorists. Again, in addition to the ordinary turns, which are bad enough, a number of curves have been placed in the most awkward and unexpected locations, such as i the middle of a bridge, midway through a densely inhabited village, where children and domestic animals play all over th street.

Passing now to the cars which were entered for the race, it is to be related that M. Dufaux, builder and driver of the only Swiss competitor, a car which appeared to have a very good chance indeed, brok his steering gear almost beyond repair thi morning, thus putting him out of the race. M. Dufaux unhesitatingly charges that the breakage was the result of pernicious ill-will and jealousy of some competitor, whose identity he does not appear to know.

Another incident that proved more exciting and might have resulted seriously occurred at the weighing in of the cars. Mr. Edge, of the English team, was emptying the gasoline tank of his car very carelessly into the street before running his machine on the scales, when sparks from his own cigarette, some persons state, dropped into the pool of fuel and started a fire. This soon communicated to an adjacent house, which was, fortunately, the fire company's station. The flames were soon extinguished and the racing machine escaped injury, which was doubtless a more important consideration than the safety of the building.

Edge was perfectly happy, but not so were the drivers of the Pipe cars. The engines in one of these refused absolutely to start. It was found necessary to change the cams and the work had not been completed at 9 p. m. and will have to be resumed to-morrow, the race morning. A not very pleasing feature of these cars, which appear to be merely touring cars fitted with more powerful motors and cut down to the limit in weight, is that the contact breaker is of such delicate construction that it does not look as if it would stand more than 200 kilometers of running. Complete sets of spare parts for this part of the car, as well as for the circulating pump, are to be carried on each car. It is difficult to see the advantage of saving a pound of weight on a pump and being obliged to carry twenty pounds of spares.

NEWARK AUTO PARADE.

More Than 150 Machines Take Part in Twenty-two-Mile Run.

Special Correspondence.

NEWARK, June 27.—The first automobile parade under the auspices and management of the New Jersey Automobile and Motor Club was held here last Saturday afternoon. More than 150 machines were in line, and crowds of spectators were gathered all along the route to see the passing procession. The cars began assembling at 1 o'clock at Lincoln Park and continued to arrive until the signal to start was given at 2 p. m.

Dr. Clement Morris acted as grand marshal and made an attempt to line the vehicles up in divisions, but it was impossible to get them completely classified. The parade started north on Broad street, headed by a squad of bicycle police, who were followed by the division of motor cyclists. The spectators were kept in order by mounted policemen.

The parade covered a distance of twenty-two miles, moving at a lively pace through the business and best residence sections of the city and westward through Orange, where the only stop was made, to allow the gaps to be closed. The line of automobiles was headed by Chief Marshal Frederick R. Pratt, president of the club, accompanied by Mayor Bruen, of East Orange, and Chief of Police Hopper, of Newark. After them came the other officers of the club and their invited guests.

Cars of every kind were in line, from motor cycles to touring cars. There were gasoline, steam and electric vehicles. Some were trimmed with American flags or bunting and others were decorated with flowers.

CARS OF NEW JERSEY CLUB MEMBERS LINED UP FOR NEWARK PARADE.

BRIDGEPORT RACE MEET.

A race meet was held at Nutmeg Park, Bridgeport, Conn., on July 25, under excellent weather conditions, and although the half-mile track was not in the best condition and the times were slow, the 800 spectators enjoyed the sport.

Special five-mile race.—A. L. Riker (gasoline Locomobile), first; H. A. Budlong (Buffum), second. Time, 9:15.

Two-mile race, steam cars.—Dr. E. Perry (Locomobile), first; D. C. Carson (Locomobile), second; W. H. Baldwin (Stanley), third. Time, 2:11 1-2.

Three-mile race, two-cylinder gasoline runabouts.—Mr. Kellogg (9-horsepower Locomobile), first; T. H. McDonald (20-horsepower Winton), second. Time, 9:05.

One-mile speed judging contest.—Won by A. L. Riker (gasoline Locomobile), who finished within one second of the six minutes allowed for the distance.

Five-mile free-for-all.—A. L. Riker, first; J. Murray Paige, second; Archibald McNeil, Jr., third. All cars gasoline Locomobiles. Time, 9:32 3-5.

Five-mile motor-cycle race.—Won by Oscar Hedstrom. Time, 8:43 2-5.

ON Thursday, June 30, the Smith & Mabley automobile boats *Vingt-et-Un* and *Challenger*, which have been entered in the races for the Harmsworth Cup in England, were tried by a committee of the Automobile Club of America, consisting of Messrs. Bostwick, Brokaw, Butler and Carpenter. The racers are to be shipped across the Atlantic to-day (Saturday).

Correspondence

Jack Frost and a Cylinder Jacket.

Editor THE AUTOMOBILE:

Sir:—It is a good deal easier to break a light castiron water jacket than it is to repair the same, and perhaps an experience of each sort, both equally successful, will interest your readers.

Given a 6-horsepower DeDion cylinder with jacket cast integral; water in the jacket; a thermometer at or around zero; and a fool garage employe who "didn't know 'twas loaded" and forgot both water and fire. The result was easy and quite mathematical. The cylinder jacket was burst in a most artistic and complicated manner. A piece some 4 inches long and 3 inches wide, of somewhat oval shape, was lifted cleanly out on the side and curved top of the jacket, and several radiating cracks from angles of the clean break, each an inch or more long, were added by way of trimmings.

The jacket was thin, 1-8-inch perhaps, and the vibration of the cylinder in motion considerable. But a new cylinder was expensive; sixty dollars was the modest price asked by the makers, and the owner and his expert mechanical friend decided to repair.

The broken piece was carefully treated on its edge with strong sal-ammoniac solution and dusted with fine iron filings very sparingly. It was then driven flush into place with a wooden mallet, clamped in and allowed to stand a week; then several screws were tapped into the cracks at the angles of the break, the jacket filled and the engine started. For a time the job seemed complete, but later the vibration combined with the expansion and contraction of the metal opened the seam in spots, breaking the "rust joint," and the jacket leaked in a slow, exasperating and tearful manner.

A council of war was held by the owner and his expert friend and a second operation decided upon. The cylinder was removed and a line of small holes drilled in the crack around the broken piece, and out along the lines of the radiating cracks. Each hole was about 1-8 inch in diameter and the holes were placed as close together as was possible without cutting into each other. Each hole was then tapped with a fine forty-thread tap and short lengths of soft iron wire were threaded and screwed into each hole, cut off, set with a gentle tap of a hammer and filed off smooth. Each hole was tapped, threaded and filled before the next was cut, as the jacket seemed too fragile to proceed otherwise. In all, one hundred and ten wire screws were put in, and when dressed down the job looked smooth and solid. The cylinder was then inverted and the repaired portion placed in the strong solution of a copper-plating bath and given a heavy coat of electrically deposited copper. A soldering iron and blow pipe were then called into play and a thin film of solder run along the line of the 110 visitors. The copper plating greatly assisted the solder in holding to and covering every suspicion of a crack or crevice which mechanical means had failed to fill. When complete the jacket was dressed down with first a coarse, and then a fine file and all surface solder removed. A coat of aluminum paint finished the job and the break and the repairs disappeared permanently from view.

The motor has been in constant use since the last operation and has driven the car to which it is attached several thousand miles. The break is absolutely closed, has never leaked a drop and cannot be discovered except by scraping off the aluminum paint and hunting most industriously.

E. N. BOWEN.

Agricultural Motor Needed.

Editor THE AUTOMOBILE:

Sir:—The enclosed letter has been forwarded to us by the Cadillac factory, and you may think it worth publishing.

FOSTER AUTOMOBILE CO.

Richmond, Va.

RICHMOND, VA.

The Cadillac Automobile Co.,
Detroit, Mich.

Gentlemen:—

I want some information on motors. Am owner of a large plantation in ——— county and have farmed enough to know what we need to make it a successful and respectable business. We need power, a cheap, substantial motor that we can hitch to a plow, harrow, wagon, or anything we now have to use horses and mules for. Horses are easily worked out and cost considerable at the start, and to feed. Now a gasoline motor, of say 4-horsepower, would do—one that could be sold at say $75 per horsepower—or a smaller motor would do for a start. Price will go according to the amount of rigging. We don't need anything but the motor gear with motor, and no fine finish, either; we will just hitch on to plows, wagons, etc., as we have them.

Farmers are the poorest paid of any class I know of, not because the stuff we grow does not sell high enough, but because we can't grow enough of it. We can't do that for the reason we can't properly work the land. Labor costs too much, and we can't do enough of it. A plow team of 2 horses, which is only half the power we need, costs with horses, rig, etc., at least $300. To feed them so as to keep them up costs at least 75 cents a day, and the man that holds the plow 75 cents a day more; they can only plow two acres a day, and only half as deep as it should be; so to plow deep enough four horses are required. We ought with a motor of 4 horsepower to do twice as much per day and plow it good and deep. Gasoline costs considerably less than corn and oats. This will solve the farmers' problem, and furthermore farming will become a respectable and profitable business. Capital will seek it and the farmer will be somebody. Can't you do something for us?

All the machine men seem to run to a new kind of plow; it is not the kind of plow, it is the force or power we need. We could do just as good work with the old-time grandfather's plow and harrow if we had the power to move it quicker and deep in the ground, turning up the stuff that the crops feed on and which is now exhausted on top; then with deep loose soil to hold large supplies of water for crops no dry weather could affect them.

I have been a farmer but five years now, having been a railroad man all my life. I lost my hearing so that I could not hold a profitable position, and, having saved my earnings instead of blowing them in, I invested them in one of these old-time plantations. I soon saw that the less plowing done as it is done, the better, so I put by the plow and went to raising cattle, as these improve the land and make a man some money with less labor. I now have land good for from 75 to 100 bushels of corn if worked properly, and that I can't do with horsepower so costly. H. H.

There is unquestionably a good market for a cheap and efficient agricultural tractor, with a motor—it need not be light, but it would better develop at least 6-horsepower—and a simple two-speed gear, mounted on a running gear capable of hauling plows or two or three market wagons. Such a tractor would do its heavy work on the low gear, and return light on the high gear, making respectively say 3 and 8 miles per hour. One such tractor, like one threshing machine, would do the hauling for one big or several small farms, and would be a most profitable investment for its owner. The Ivel tractor, made in England and described in THE AUTOMOBILE of November 21, 1903, would be about the right kind of machine.

Early Spring Navigation in Maryland.

Editor THE AUTOMOBILE:

Sir:—Leaving Washington on Sunday morning one bright sunny spring day, we followed the fine macadam road through Brightwood (5 miles), on past the well known town of Sligo, well known from the song, and through the historic spot at Leesboro (11 miles), and on to Olney (19 miles). We chose this long route to Baltimore in order to have all but six miles on the Pike. Part of those six miles is nearly done, but not quite, as you will see later. At Sandy Springs (23 miles) the Pike or stone road suddenly stopped and the outlook was anything but inviting, suggesting aquatic rather than land travel. However, it was nearly noon and only six miles to shore, so in we plunged. The first part of the road that was really soft happened to be on a slight downgrade, and the sliding was in the right direction. How the spray dashed over the bow when we went through the water over the heavy ground swell! It reminded me of the pictures of *Mercedes I.* or *Vingt-et-Un* at full speed. As we approached the northern shore we passed by what might have been and did resemble an

ocean breakwater, although it simply made a good sidewalk, as you will see in the picture, and prevented the natural drainage of the water into the ditch, making it a fine deep channel for the unsuspecting navi-

NAVIGATING MARYLAND ROADS.

gator. With the hard fine "pike" in the distance, and the twin screws churning up the terra cotta in our wake, on we went through the bottom, where we were told for miles in advance by farmers and men driving in buggies that we could not get through but had better go back. They did not know we could not turn around. At length, as Fate would have it, we fetched up solid on the bottom of the engine case front, and on the axle case in the rear, and the wheels were supported by many props to keep the car from falling over. The wagons coming in the opposite direction rolled off the stone road and just sank down into this hole, making it deeper and deeper, and by working the wheels from side to side they had made quite a respectable hole.

With the assistance of some colored men, who I learned were surveying the situation with the idea of going through the next day on a traction engine, I built something of a foundation under each wheel, while the fence rails were used as levers to raise them up, thereby destroying a considerable portion of the breakwater, which in this manner served a more useful purpose. With this ten-foot stretch negotiated in this manner, the rest was plain sailing, and we had a very pleasant ride into Ellicott City, where we joined the old Cumberland road, more familiarly known as the National Pike, built over a hundred years ago, with fine stone arch "S" bridges and fine smooth surface all the way to Baltimore, ten miles or more. Here we filled our gasoline and water tanks, and after looking at the ruins of the great fire, we took on a pilot in the person of Dr. Chandlee and went out over the old Pimlico Road to an inn, where we had a pleasant supper. After supper we continued our journey on this famous road, where the horsemen have their trotting matches and their speedway, past Pikeville (9 miles) over the Reisterstown Turnpike (18 miles), where you are charged over five cents a mile to drive your own car over part of the way, more than trolley fare, to Westminster (30 miles). Here is a splendid new hotel with very excellent accommodations and very hospitable. We slept well and were up early to enjoy the fine ride through Hanover (23 miles) to York (43 miles), over the oldest turnpike road in the United States, the "Old York Road," constructed in 1711, nearly two hundred years ago.

From York we followed the old Pittsburg Pike, crossing the Susquehanna River over a railroad bridge nearly a mile long, on to Columbia (56 miles), to Lancaster (67 miles), and from here for a distance of something over 60 miles to Philadelphia, over the first macadamized road which was so reconstructed in 1792 and known at that time as the best road on this side of the ocean. They were building a trolley just beyond Coatesville, however, and I failed then to recognize it. The road runs through the towns of White Horse, Coatesville, a good place for lunch; Downington, Malvern, Wayne, Bryn Mawr, Ardmore, and in through Lancaster avenue and Market street. Here we again refitted and had supper. We then crossed the ferry to Camden and over on to Burlington to spend the night. The next day we enjoyed a pleasant ride home over the good roads in New Jersey. One farmer remarked, "When you see one of those gol darned things on these kind of roads, it makes you think there's something in 'em." AUGUSTUS POST.

New York.

Electric Automobile Operation.

Editor THE AUTOMOBILE:

Sir:—I have read with much interest the very illuminating article on the subject of the abandonment of electric ambulances by Roosevelt Hospital.

It is a great pity, but none the less a fact, that "The world marks the hits but not the misses."

Your representative's interview with Mr. Lathrop indicates that, as usual in such cases, the electric automobile was not at fault, but was the victim of unsuitable organization and unfamiliar attention.

Experience elsewhere amply justifies the statement that a good grade of horse drivers are perfectly competent to drive electric vehicles, and had the manager of the hospital made an arrangement with some competent man manually familiar with storage batteries, to visit the hospital every day or so and look over the batteries, and had used over-voltage circuit-breakers in charging them and kept away from the battery, any electrician, however able, who was not manually familiar with the care of storage batteries, I think Mr. Lathrop would have found the electric ambulance a most gratifying solution of the undoubtedly trying conditions which he is called upon to meet.

All this is, of course, assuming that the ambulances as used by him were properly proportioned and adequately batteried, which I assume they were.

When operated with a proper knowledge of their requirements, the electric automobile has given such a wonderful account of itself commercially within the last three or four years that it is entirely past the explanatory stage, but, nevertheless, those interested in improved methods of transportation cannot fail to appreciate Mr. Lathrop's very frank avowal of the extraneous causes of the undue expense of his attempt.

In a considerable and very intimate observation I have noted that in the relatively rare cases in which business transportation by electric vehicles has been reported a failure it has been due to one of two causes:

First: Self-confident but inexperienced care; and

Second: Insufficient proportion of battery for the original design of the vehicle.

HAYDEN EAMES.

Cleveland, O.

To Whom is License Issued?

Editor THE AUTOMOBILE:

Sir:—When an owner gets a license for his car is he the only one having a right to run it? Is it the car or the operator that is licensed, or both? Should a man teach his wife, for instance, to run his car, would she be allowed to operate it, according to law, without also having a license? G. E. P.

New York.

In most instances the license is issued to the owner of the vehicle under the supposition that he will both use and drive the car. If he employs a hired man in New York State this man would have to procure a chauffeur's license and wear a badge while on duty.

No doubt many owners permit their relatives and friends to drive, and it is not likely, if the car is properly tagged and is going along the street at a legal rate of speed, that any policeman or peace officer will halt it and demand by what authority a person drives it.

In case of accident or arrest for any speed infraction, it would, of course, place the owner at a disadvantage if the car was being driven by any one without proper legal authority.

THE Bavarian ministry of transportation, according to the U. S. Daily Consular Reports, has issued tenders to a large number of firms for the supply of railroad motor cars. These are to be built in different sizes, according to the service required, whether main line or branch work. The larger cars will be fitted to accommodate the entire freight, passenger and mail traffic of small branches. The speeds required of the various cars range from about 31 miles an hour to 46 miles an hour.

IT IS generally known among automobilists that most of the accidents which the dailies refer to as automobile explosions are simply fires caused by the ignition of gasoline oozing through leaks in tanks. As long as the gasoline tanks and pipes are in perfect order no gasoline can be ignited.

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Horse Drawn vs. Power Driven. The July number of *Country Life in America* has a short article on the comparative expense and what it calls "efficiency" of the horse and the automobile. In this article the cost of keeping a $2,500 car is compared with that of a pair of horses, and the cost of keeping a $1,000 car with that of one horse. In the former comparison, the automobile's mileage is assumed as 4,000 per year, and the depreciation as 50 per cent. in two years; and the chauffeur's wages are reckoned at $1,300 per year. The total annual expense for the automobile foots up, for depreciation, tires, gasoline, minor supplies, repairs and chauffeur, to $2,405. Against this is a bill, for depreciation, feed, shoeing and clipping, and veterinary charges on two horses, depreciation on two carriages and harness, and coachman's wages, of $1,257; a balance in favor of the horses of $1,148. In the second comparison the chauffeur and coachman are omitted, and the mileage is put at 2,500 annually; depreciation the same as before. The respective accounts stand: for the automobile, $525; for the horse, $448.

To offset the difference in expense, the automobile is said to have a "radius" of forty miles for the higher-priced car, against fifteen for the horses, and of thirty miles for the other car, against ten for the horse: and the "efficiencies" are computed as proportional to the areas of circles of those radii; or, roughly, as seven to one for the larger and nine to one for the smaller outfits.

A study of the estimated expenses in detail for the automobiles has convinced us that they are liberal, at least, though not perhaps actually extravagant for men who bring no personal attention or skill to their machines. Tire expense, for example, is taken as five cents per mile for the large and four cents per mile for the small machine; and the latter figure is certainly higher than necessary with any degree of care bestowed on those members. The repair allowances, of $100 and $75, respectively, are probably fair averages, though an intelligent owner with a good car can come away inside of them for the first few thousand miles of the car's life, which are all that this article considers. At twenty cents per gallon, the gasoline bill for the light car is taken as $50 for 2,500 miles, or ten miles per gallon—a generous figure, certainly, suggesting a bad carbureter or a burner "on the bum." Half that would be ample for a gasoline runabout carrying, as the article assumes, but two people.

But a more vital criticism to be made of all such comparisons is that they assume that the horse and automobile are comparable things. The "efficiency" plan of comparison above noted is foolish, of course, for vehicle service is measured by mileage, not by the square of the mileage; but nevertheless the functions of horse and automobile are so wholly different that no one thinks of comparing them, except the business or professional man and the man of small purse, who thinks of substituting the one for the other. The physician who purchases an automobile soon finds his practice so increased by his greater ability to respond to calls that the difference in cost for equal service becomes a bagatelle. The man of means finds in the automobile an exhilarating means of out-of-door recreation such as no horses can replace. The economical man will be likely to find the automobile more costly than the horse, by the year, but much less so by the mile; and if he uses it more it is because the pleasure of it is worth more to him than the money.

A point sometimes overlooked in this connection is the much greater liability of horses to serious or prolonged disablement. An automobile, when it wears out or goes wrong, can be repaired in a reasonably short time and made for most purposes as good as before. It is a machine, and responds perfectly to the intelligence that directs it. The horse has a long list of possible ailments, any one of which may send him out to grass for weeks or months; and he may be ruined in a day by bad driving.

Again, it may be pointed out that, whereas the cost of keeping a horse is quite as much when the animal is not being used as when he is in service, that of the automobile is reduced to little more than interest on the investment. Another advantage of the machine, equally real, but quite impossible to express in figures, is the fact that it does not tire and can be driven, with only the usual wear and tear, steadily all day, and day after day. This makes it possible for its owner to cover in a vacation tour five to ten times the ground that he could cover with a horse.

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Irresponsibility in Racing. The rather absurd termination of the first of the much discussed *Vingt-et-Un—Fiat* races only serves to emphasize the striking lack of seriousness which seems to characterize many public contests in this country in which auto boats and automobiles, owned in the trade and out, engage.

The national endurance runs and most of the large shows have been managed most creditably, but one would have to think rather hard to name a track race which has not been more or less marred by delays, erratic changes in the program, and lack of organization at one or more vital points, whose going wrong resulted in confusion elsewhere as well. Men experienced and capable in other lines have shown themselves almost painfully at sea when confronted with the problem of effectively managing a race meet.

The same incorrigible amateurishness has had some conspicuous examples in the recent races between autoboats, where lack of management has been less excusable owing to the fact that most of these events have been conducted by presumably experienced clubs. The failure to provide men at the stake-boats, for instance, is hard to excuse on any grounds. Almost as bad is ignorance of the course, such as is frequently displayed by competitors; and the failure of half or three-quarters of the entered boats to start is a phenomenon so common that it may soon call for drastic treatment.

✷

Railroad Crossing Accidents. An amazingly large proportion of the serious automobile accidents that have been chronicled during the last two months have occurred at railroad crossings and on street car tracks. This is true of different sections of the United States and European countries as well. Recent cases that are very fresh in the mind are the collision of a Chicago, Elgin & Aurora electric interurban car, running at about sixty miles an hour, with the Dixon automobile party from LaGrange, at Austin, Ill., resulting in the death of both Mr. and Mrs. George E. Dixon; the disaster to the Noakes party at the Van Cortland Park crossing of the New York Central Railroad, resulting in serious injuries to several of the occupants of the automobile; the collision of the Jaeger touring car with the sidewalk on 86th street, in Central Park, which caused the death of Miss Maas, at the end of last March; the running down of a party of five

in an automobile at Milford, Mass., by a New York, New Haven & Hartford train last Saturday, which resulted fatally to the owner of the car, I. S. Wood, and serious injuries to his wife, son and a friend.

These are not a tenth of the accidents of similar nature reported since the present riding season opened. The immedate causes leading up to these deplorable accidents vary with the cases and the testimony of the witnesses, but whatever the circumstances surrounding each accident, there can be no question that the primary cause in most cases is inexcusable negligence to observe proper precautions at crossings. Any driver to whom several persons, particularly relatives and friends, have entrusted the safety of their lives, ought to have sufficient sense of responsibility to take no chances whatever of an accident. Any man with ordinary sense knows that the danger at railroad and street car crossings is increased for passengers in an automobile by the noise and speed of the vehicle itself, and this should cause him to take more than the usual precaution in approaching and crossing the tracks.

Operators of motor cars are disposed to rail at pedestrians who fatuously start to cross the street without first looking in both directions to assure themselves that there is no danger of being run down by a vehicle, yet many of them neglect to observe the same precaution themselves when crossing car tracks, as is proved beyond controversy by the frequent accidents. There is only one safe rule to follow, and that is to stop the car and have some one get out and walk ahead to see that the crossing, at the time, is safe.

✷

ISN'T it about time that the people who organize track races did something to abate the dust nuisance in those events? It is not only annoying, but a serious peril to those engaged, as well as to the spectators, for a thick dust cloud to hang over the turns of a track, preventing, as it often does, any clear view of these turns, till one is actually upon them. If oil, tar, westrumite, or any other dust preventer, even if it be but temporary in character, can be used on the tracks without injuring them for horse racing, nothing should be allowed to interfere with its general application.

Resolutions were adopted by the Board of Governors of the Automobile Club of America, at a meeting held June 28, calling the attention of Mayor McClellan, Borough Presidents Ahearn, of the borough of Manhattan; Haffen, of the Bronx; Cassidy, of Queens, and Cromwell, of Richmond, to the numerous grade crossings in their respective boroughs, and requesting that they use their influence to secure adequate protection. A resolution was also adopted thanking President Haffen for his work in having paving and other road work done. The condition of certain parts of Jerome avenue was pointed out, and the request made that repairs be made so that a continuous good road will be available from New York City to Westchester County, by way of Jerome avenue.

New Turn in Hoodlumism.

The publicity given to the practice of throwing stones and other missiles at automobilists by the hoodlums of New York by the recent Gottshall case seems to have stimulated this form of amusement throughout Greater New York and the towns across the Hudson. There has been much discussion of the cause of the practice and of possible remedies, and not a few persons have sought relief for their feelings on the subject in the correspondence columns of the daily press. Prominent among these open letters are many from apparently well-meaning authors whose explanations and criticisms are plainly biased by their own prejudices. By these the stone-throwing practice prevalent in certain sections of the East and West Sides is attributed to a desire on the part of the throwers to defend, or to avenge the real or fancied wrongs of the children playing in the streets. While this seems plausible, in theory it is not proved in practice. The fact of the matter is that the young rowdies are ever on the alert to amuse themselves at the expense of victims who can be attacked while defenseless and unable to retaliate.

This was forcibly exemplified by an attack of Policeman John Nevill on June 24. Nevill took his wife and children out for a drive on that day, and, while passing near the place where Mrs. Gottshall was stoned a little more than a month ago, a gang of boys began throwing stones at the carriage. Nevill jumped out and seized the biggest tough in the gang, intending to take him to the station. In less time than it takes to tell a mob had surrounded the party and began stoning in earnest. In spite of Nevill's efforts to defend his family, all were struck a number of times, and it was only with the greatest difficulty that the policeman managed to get his prisoner into the vehicle and start to drive off. No sooner had he started, however, than a man in a cart drove alongside the carriage and attacked Nevill with his whip. Nevill defended himself with the same weapon, but while the strange duel was going on a tough from the mob got into the wagon with a heavy piece of wood and, slashing at the overmatched policeman, nearly broke his wrist. Thus beset, Nevill was compelled to release his prisoner and make his escape, followed by the mob with stones and curses. He made his report at the station and went to a hosptal for treatment.

In a far more attractive and orderly district of New York the same idea—that of doing malicious mischief from a safe distance—is being manifested. The drivers of fast horses who throng the Harlem Speedway on Sundays are frequently made the targets for stones thrown by boys on High Bridge, and the oarsmen and other frequenters of the Harlem River are also used as marks. Several painful injuries have been inflicted, and nothing but the height and the difficulty of hitting a rapidly moving object prevents the infliction of a larger number of injuries. The young cowards know well that they are safe so long as there is no policeman in sight on the bridge.

A clergyman, writing to a daily paper notorious for its anti-automobile sentiment, after dilating upon the recklessness of cabbies, motormen and automobilists, asks: "What more natural, then, than that the hoodlum of the street should blindly strike at the hoodlum of the automobile?" This naive query raises visions of the good minister of the gospel taking his family for a quiet drive in his surrey through "Little Italy" on a Sabbath afternoon and meeting gangs of lawless youths lying in wait with stones, bricks, dead animals, decayed vegetables and dilapidated washboilers to avenge themselves for his invasion of their playground. The situation certainly has its humorous side, as displayed in the daily papers; but somehow the funny side does not seem to appeal to the victims of these assaults.

NEW YORK-BOSTON NON-STOP RUN.

A 16-horsepower Darracq touring car, driven by A. J. Picard, left Heald Square, New York, at 6 o'clock Sunday evening, June 26, to attempt the feat of running at least 1,000 miles without stopping the motor and without breaking any law. Shortly after 1 o'clock p. m. on Wednesday, June 29, the same car rolled smoothly up to the same spot, having, according to M. La-Roche, the New York agent, accomplished all that was intended and something to spare.

"We ran 1,053 miles before the motor stopped," said Mr. La Roche, "and it would not have stopped then if we had not turned into a barbed wire fence to avoid running down a woman. One of the fence wires sheared off a wire of the ignition system, stopping the motor, but a hasty temporary repair was made and the motor re-started after a delay of less than a minute. We had made our distance, however, and a little more, and were satisfied. The motor did not give a minute's trouble, and in all the distance traveled we had only one puncture in our Michelin tires. We were particularly careful not to exceed any legal speed limits, and were complimented more than once on our running by constables who knew what we were doing and were on the lookout for us."

A. J. Picard took the first trick at the wheel, leaving New York at about 6 o'clock Sunday evening and arriving at the Westminster Hotel, Boston, at 9:45 o'clock the following morning, stops having been made at New Haven and Springfield for gasoline, the motor being kept running. Twenty minutes later Mr. La Roche took charge and started back for New York. Ten-minute stops were made for gasoline and oil at Worcester, Springfield and New Haven. New York was reached at 11:55 o'clock Monday night. Both these sections of the run were entirely devoid of incident, the operators state, and the motor worked smoothly at all times. At 12:25 o'clock Tuesday morning, half an hour after the arrival of the car, it was started for Boston again by Mr. Picard, who had returned to New York by train. Gasoline was taken on at New Haven. The only puncture of the trip occurred just outside of Hartford, and was repaired in twenty-one minutes. Another stop for gasoline was made at Springfield and the run continued to Boston, which was reached at 4:25 p. m. Here Mr. La Roche again took charge and began the return trip at 5:05 o'clock. Stops for supplies were made at Worcester and Springfield. It was in this section of the run that the motor was stalled. A woman driving a horse and buggy got in the way and forced the car into the ditch, Mr. La Roche stating that he either had to do this or run into the woman. At this point the cyclometer read 1,053 2-3 miles. After getting under way again the run was completed and New York reached at 1:15 p. m. Wednesday, June 29, the total distance covered, according to the cyclometer, being 1,333 1-3 miles. Neither of the operators was greatly fatigued by the task and state that the fine running of the car saved them much discomfort.

TO INSIST UPON EXCLUSIVE AGENCIES.

Licensed Manufacturers Decide to Enforce Demand that Agents for Cars Built Under Selden Patent-Grant Handle no Independent Maker's Product.

Special Correspondence.

BUFFALO, June 27.—Trade matters of an important character were discussed at the annual meeting of the Association of Licensed Automobile Manufacturers, which was held at the Iroquois Hotel on Tuesday, June 21. The meeting was called to order by J. R. Smith, of Detroit, president of the association. About twenty-five prominent automobile manufacturers were present. The meetings were executive and such business as was transacted was made known to the public only in a general way. Technical questions dealing with the automobile are said to have been considered.

The matter of agencies for the year 1905 was the principal topic of discussion and action. Agents controlling the output of automobile factories not allied with the association will not be permitted to handle the licensed products. This subject was thoroughly considered and the necessity for the enforcement of such an order was explained by several members. A similar ruling was in force last year, but it was not strictly enforced and the agents managed to evade its purpose in many ways. Next year, however, measures will be taken to compel the agents to accept exclusively either the licensed automobiles or the non-licensed manufacturers' products. It is said that formal notice to this effect will be given to the agents at the beginning of next year.

The visiting manufacturers were entertained by the local dealers. The automobiles were provided and the visitors were taken on a tour of the city over some of Buffalo's best roads and boulevards. Tuesday evening the manufacturers were given a luncheon at the fashionable Buffalo Club.

An interesting fact which developed at the meeting of the Association of Licensed Automobile Manufacturers at Buffalo is that practically all of the 1905 models will be actually on the market by January 1. This is owing to the fact that most of the makers who are in the automobile business to stay have settled down to the types they consider best, and only very minor changes will be made in cars for next season, according to General Manager George Day of the association.

"The changes in next year's cars," said Mr. Day, "will be very much less important than the changes made in this season's output. The manufacturers all have good cars and do not need to make important changes. A very large proportion have made up their minds just what next season's cars will be, and preparations to manufacture are already under way. Cars with one, two, three and four-cylinder motors will be manufactured by members of the association.

"An exceedingly pleasant feeling was found to exist between the members of the association and the agents, which, of course, is very desirable, as the best results cannot be obtained except by the co-operation of all concerned."

SHIPPING FOUR-CYLINDER WINTONS.

Staff Correspondence.

CLEVELAND, June 27.—The Winton Motor Carriage Company is making its first shipments this week of its new four-cylinder touring cars. There have been rumors for many months that the Winton people would build a four-cylinder car this season, but the advertising and sales department has never officially admitted it and even at this writing the company is unwilling to make public the details of construction, preferring to wait until samples have been thoroughly tested in the hands of agents. It is understood, however, that the motor is placed horizontally across the center of the frame at the front with practically the same arrangement of mechanism as was shown in the smaller Gordon Bennett racer built last year.

Sales Manager Shanks states that his company has built and sold 800 two-cylinder cars as originally planned for the season, and is now at work on a number more to take care of orders in sight. Work is also being pushed on 200 of the four-cylinder cars.

SCHEDULE OF LOCAL SHOWS.

Dates for Local 1905 Exhibitions Decided Upon at Promoters' Meeting.

The promoters of local automobile shows recognized by the National Association of Automobile Manufacturers held a joint meeting with a committee from the Association at Buffalo on June 22, at which were present William Metzger, of Detroit; George Collister, of Cleveland; F. J. Wagner and D. H. Lewis, of Buffalo; George L. Lowe, of Boston; H. D. LeCato and H. W. Schlichter, of Philadelphia, and B. C. Washington, Jr., of Washington, representing the recognized associations which have heretofore promoted local shows; and H. J. Budlong, Charles Clifton and S. A. Miles, representing the Association.

The following schedule of dates for shows was fixed upon:

New York—Jan. 14 to 21.
Chicago—Feb. 4 to 11.
Detroit—Feb. 20 to 25.
Cleveland—Feb. 27 to March 4.
Buffalo—March 6 to 11.
Boston—March 13 to 18.
Philadelphia—March 20 to 25.
Washington—March 27 to April 5.

The N. A. A. M. was requested by the show promoters to send a representative to each show, the promoters to bear the expense. It was agreed that the same method of space allotment adopted for the national shows shall be adopted for the local exhibitions.

KONIGSLOW BOUGHT OUT.

Staff Correspondence.

CLEVELAND, June 27.—The Globe Machine & Stampings Company, 970-972 Hamilton street, this city, has acquired the plant and business of Otto Konigslow, 31 Michigan street. Mr. Konigslow will go with the company as stockholder, director and superintendent. The company will occupy the Hamilton street factory, which will be enlarged. Mr. Konigslow has been closely identified with the automobile business for a number of years through the manufacture of a line of special parts and of the Konigslow gasoline car. These lines will be continued.

THE Board of Directors of the recently organized Motor and Accessory Manufacturers held a meeting at the Marlborough Hotel, New York, on June 23, when three new members were admitted, viz.: the Detroit Steel Products Company, Detroit; C. A. Mezger, New York; and the George R. Taylor Co., of Springfield, Mass. Negotiations are in progress with the N. A. A. M. regarding the allotment of space at the various automobile shows.

WIDESPREAD INTEREST IN FAIR EXHIBIT.

Buyers from All Quarters Visiting the Automobile Display in St. Louis and Leaving Orders—Demonstration Cars Used on the Grounds.

Special Correspondence.

ST. LOUIS, June 18.—The interest shown in autotmobiles at the World's Fair is remarkable, even to the National Association of Automobile Manufacturers. Those who come and give their time for hours to look over the various makes of cars, when there is so much else to see at the Fair, are interested beyond question, and they prove it by leaving orders.

The sightseers are a cosmopolitan crowd to look upon. The Japs study the American steam cars and the French racers. The Germans go through the American section very carefully. Inhabitants from Australia and New Zealand have ordered several automobiles to be shipped to their antipodean homes. Westerners throng the place and ask all manner of intelligent questions.

DEMONSTRATION CARS IN THE GROUNDS.

Grout Brothers were the first exhibitors to complete their display and they are doing a rushing business. They make their great hit with the $650 runabout, which comes within reach of the many as to price and is built on strong, practical lines. The manager has made arrangements with the World's Fair officials to keep cars outside the Transportation Building to be used for demonstrating purposes. Prospective purchasers can step from the exhibit out to the car in waiting and see for themselves the concentration of power at small cost which is claimed for the Grout. This company also exhibits a high-priced touring car, but the little model has so far proved the more attractive to purchasers.

The official photographer at the Fair has purchased a Grout car, which he uses about the grounds. A sixty-passenger Columbia electric break is in use by the Blanke Tea and Coffee Company in taking care of its friends during the Fair. Many private gasoline cars have been permitted on the Exposition grounds by the World's Fair management.

FEATURES OF SOME EXHIBITS.

The Oldsmobile manager reports a brisk trade. He is securing agencies all over the world. Foreign visitors examine his cars daily and he has taken many orders for individual machines to be shipped in August. The youngsters as well as older sightseers like the Oldsmobile section, because souvenirs in the form of tiny relief figures of the Olds car mounted on stick pins are given away.

The exhibit of White steamers is very attractive. Half a dozen cars, all that can be disposed of, as the output for the season is sold, have already been purchased by visitors at the Fair.

The Pierce display is also good, and orders are being taken for Pierce stanhopes, although deliveries cannot be promised until August. The Arrow touring car is attracting much attention.

In the Haynes-Apperson display is a fine aggregation of tonneau cars. The new tonneaus are 250 pounds lighter than last year's models, notwithstanding the horsepower has been increased from 12 to 14 and the rear axle is now made of 1 1-2 inch nickel steel. Roller bearings are also used.

Among the machines shown in the Ford booth is one said to be the first automobile built in Detroit and the third one built in the United States.

MT. WASHINGTON CLIMB AND TOUR.

Fast Time Made by Investigating Party Up 7½-Mile Ascent — Road Closed to Automobiles Except During Week of July 11—Fine Touring Country.

A preliminary "climb to the clouds," up the road to the summit of Mount Washington, has been made recently by a party including Harlan W. Whipple, in his 60-horsepower Mercedes; Harry Fosdick, of Boston, in a Winton 20-horsepower touring car; L. J. Phelps, of Stoneham, Mass., in a 20-horsepower Phelps, and Otto Nestman in a 7-horsepower Stevens-Duryea. The same party also went over the route of the proposed two-day tour to follow the hill-climbing test scheduled for July 11 and 12. All of the machines made the ascent and acquitted themselves surprisingly well. Nestman, in the Stevens-Duryea, eclipsed the former record of the Phelps touring car by nearly an hour, his time being 48 minutes 30 seconds, while Fosdick in his big Winton made the 7½ mile journey in 1 hour 40 minutes, accompanied by Mrs. Fosdick and a mechanician.

IN THE WHITE MOUNTAINS—MT. WASHINGTON IN THE MIDDLE BACKGROUND.

As a result of this exploration trip the opinion is held by the experienced drivers named that the automobile that can successfully traverse the White Mountain roads of New Hampshire can safely be trusted to give a good account of itself in any section of the country. Not that the White Mountain roads are worse than the average country highways—some of them are much better—but the many hills of varying length and grade test the engine and running gear thoroughly. Mr. Phelps said that the observations he had made would be of importance to his firm and are likely to be reflected in next year's models. He also said that he believed it would be to the best interest of other manufacturers if they brought their machines into the mountains for trial runs, especially the new experimental models.

No other attempt to climb Mt. Washington by automobile will be allowed until the date of the first annual contest, July 11, and from that date no automobile will be allowed on the toll road until next year. This highway is operated under a rigid state charter, and as the owners are dependent upon horse-drawn vehicles for the major part of their income, it is not surprising that they have closed the road to automobiles except for the week in July during which it is given to them exclusively. All records made during that week will, therefore, stand until July, 1905.

It is expected that a number of automobilists from New York, Boston and intermediate cities will drive to the White Mountains for the week's tournament. Messrs. Whipple, Fosdick and Phelps drove up in their cars from Boston and returned the same way. The tourist from Boston has a number of routes open to him to Dover, N. H. From Dover all routes direct into the mountains lead through Rochester, Ossipee and North Conway to Bretton Woods by way of Crawford Notch. Tourists starting from New York can take either the Springfield or the Shore Line routes to Boston, or ship their cars by water over this initial part of the trip. The Maine Steamship Company's boats run direct from New York to Portland, whence the White Mountains are less than 100 miles distant by way of Sebago Lake.

The promoters of this midsummer contest and tournament are doing all that can be done to make the affair a success, and it is hoped that a large number of tourists will join with the hill climbers to make this an annual tournament of especial importance in New England. There is no better touring country in the East than the White Mountain region of New Hampshire, where the scenery is magnificent, the temperature cool and the roads good.

Among the entries received for the hill-climbing contest are the following: White Sewing Machine Co., White steamer; Ford Motor Co., Ford; Stanley Motor Carriage Co., Stanley steamer; Phelps Motor Vehicle Co., Phelps; Oldsmobile Company, Oldsmobile; Peerless Motor Car Co., Peerless; E. R. Thomas Motor Co., Thomas; J. Stevens Arms & Tool Co., Stevens-Duryea; Winton Motor Carriage Co., Winton; Waltham Manufacturing Co., Orient buckboard; Haynes-Apperson Co., Haynes-Apperson; Crest Automobile Co., Crestmobile; Consolidated Motor Co., delivery wagon; George N. Pierce Co., Pierce Arrow; Packard Motor Car Co., Packard Model L; United Motor Corporation, Cameron; Prescott Automobile Co., Prescott steamer.

In addition, the following well known racers will participate: Nathaniel Huggins, 40-horsepower Decauville; Harry Harkness, 60-horsepower Mercedes; H. L. Bowden, 60-horsepower Mercedes; Harlan W. Whipple, 60-horsepower Mercedes, and a number of others.

WESTERN TOUR ROUTES.

Probable Courses of World's Fair Tourists Through Oklahoma and Kansas.

Additional details received by the St. Louis Tour Committee regarding road conditions indicate generally favorable conditions. The roads from Cleveland to Toledo and beyond have been inspected and found excellent, and it is believed that no road directions will be required for this section, the confetti trail being sufficient. The Hollenden Hotel at Cleveland will be committee headquarters and, as at other places, officials will be prepared to direct tourists to garages and repair shops.

At Toledo the tourists will be met east of the city by the local club, and will be assisted in every way. The route through the city will be marked with flags. Officials at the Toledo headquarters will wear red caps. The tour committee offers the suggestion that this plan be adopted at other places to facilitate matters.

The Kansas City committee is working on the routes west of St. Louis, and has made a number of suggestions which probably will be followed closely. Two roads across Oklahoma have been suggested, one following the Santa Fe Railroad and passing through Ardmore, Norman, Oklahoma City, Guthrie, Perry, Ponca, Newkirk and entering Kansas at Arkansas City, and the other following the line of the Rock Island Railroad through Terrall, Ryan, Marlow, Chickasaw, El Reno, Kingfisher, Enid, Pond Creek, Medford and entering Kansas at Caldwell. At Wichita, Kansas, these two routes should be united, the one from Arkansas City leading to Wichita via Winfield and the one from Caldwell via Wellington. The route through Kansas from Wichita to Kansas City is Wichita, Newton, Peabody, Florence, Elmdale, Cottonwood Falls, Emporia, Osage City, Ottawa and Olathe.

Iowa tourists to St. Louis are advised to join the Denver and Kansas City travelers by passing through Kirksville, Macon, Moberly, Centralia, Mexico and Danville, joining the main body at Warrenton.

The Touring Committee announces its intention of discouraging in every possible way anything approaching speeding, or any tendency on the part of the participants to turn the tour into a series of races or an endurance contest. No restrictions as to the length of time to be occupied will be made, and even the route selected for the tour need not be strictly adhered to. With regard to the awarding of certificates for perfect runs, the committee states that registration books must be closed at 10 o'clock p. m. each day, owing to the necessity for transporting the officials to the next stopping place. Any tourists who speed ahead of the main body will have to wait at the next stopping place until the registration books are opened, so they will gain nothing by their hurry.

GEORGE ADE, of fable fame, was recently arrested in Chicago for speeding. He proved an alibi, however, by showing the judge that his car was a red one, while the policeman who arrested him swore that the one he saw was blue.

RHODE ISLAND CLUB 270-MILE TOUR.

Delightful Three-Day Club Run from Providence to Portsmouth, N. H., Through Beautiful Mountain Scenery and Over Good Roads.

Special Correspondence.

PROVIDENCE, R. I., June 27.—The club run of the Rhode Island Automobile Club to Portsmouth, N. H., June 24 to 26, which was the first long run of any of the New England clubs, was eminently successful, and the tour of upwards of 270 miles has left such a favorable impression in the minds of the participants that in all probability long runs will be a feature of the Rhode Island club's future programs.

Eleven cars, carrying about forty persons, returned to Providence at a seasonable hour Sunday night, and the participants claim that the tour is the most notable of the year up to the present time.

The preparations made by the committee on runs and tours were ample to meet the demands of the tourists and not an unpleasant incident or accident of any kind occurred. The Rhode Islanders were extended the right hand of good fellowship by the clubs throughout northern New England and the courtesies extended by the New Hampshire club and the Park Commissioners of Lynn added considerably to the pleasure of the trip.

The trip was made over some of the best roads in the country, and only those who have journeyed through the rugged New England hills and dales can fully appreciate the enthusiastic reports of the beautiful scenery brought back. The twelve-mile macadam road between Ipswich and Salem left a very favorable impression and the scenery at Beverley, Beverley Farms, and along the road from Magnolia to Gloucester was a pleasing contrast to the dusty and hilly highways encountered about Cape Ann.

The members intending to participate in the tour gathered at the club headquarters in the Crown hotel, Providence, Friday forenoon. The start was made soon after 10 o'clock and the party proceeded directly to Boston. Two hours were spent at the Hub, during which time dinner was served at the Lennox hotel, and in the afternoon the run to Magnolia was made. When the committee laid out the route the famous Lynn Woods, from which automobiles are excluded by order of the Park Commissioners, was regarded as an attraction. The committee communicated with the commissioners, asking permission for the party to pass through and received an affirmative reply. When the tourists arrived at the city line, Friday afternoon, they were met by the commissioners in an automobile and escorted all through the woods.

Hotel accommodations had been reserved at Magnolia, and the dusty travelers found rooms and refreshments awaiting them.

At a meeting of the members to lay out the route for the following day, complaint was made by some that it was difficult to follow the course of the pilot car; the several cars strung along the road for more than three miles in order to avoid the dust and turns the car ahead would be out of sight, causing confusion and loss of time in making inquiries as to the proper road. R. Lincoln Lippitt, who steered the pilot car, procured several bags filled with waste paper, which he had cut into small pieces, and during the next day's run from Magnolia to Portsmouth this improvised *confetti* was used to mark the route at turns and forks. The success was so great that it was continued during the remainder of the trip.

Friday night was spent in Magnolia and Saturday's journey was over the roads near Cape Ann close to the ocean. The New Hampshire club, which had previously been notified of the contemplated run, sent a car to meet their Rhode Island brethren at Hampton Beach and escorted them to the club's headquarters at Boar's Head, where a clam dinner was served. The royal reception by the New Hampshire club was doubly welcome, as a severe electric storm broke during the repast. After dinner the storm cleared and the run to Portsmouth was made without trouble.

The return trip from Portsmouth to Providence was made Sunday. Lunch was served at Salem and the party arrived at their homes about 9 o'clock in the evening.

If the success of the run is to be measured by the amount of pleasure derived by the participants, the trip was indeed a success and the members of the committee as well as the members of the club are congratulating themselves upon the outcome of the venture.

The following persons participated: Dr. J. A. Chase, president; F. M. Barber, assistant secretary, and Mr. and Mrs. Lowell Emerson, in Stanley steamers; R. Lincoln Lippitt, chairman of the runs and tours committee; Dr. Charles D. Winsor, Elliot Flint, Mr. and Mrs. E. I. Rogers, E. I. Rogers, Jr., Morgan W. Rogers, Mrs. L. B. Witter, Henry A. Carpenter, Alva Carpenter, Edward F. Parks, Henry A. Palmer, in Winton touring cars; W. P. Mather, Misses Ruth and Janet Mather, F. A. Ballou, Russell Knight, E. C. Longley, George T. Hall and F. A. Buckhout, in Pope-Toledo cars; Harry O. Potter, Harry G. Martin, F. L. Chase and Pardon Miller, in a Peerless; Mr. and Mrs. B. W. Barrows, Mr. and Mrs. Glen A. Tisdale and Miss Amey Allen, in a Thomas touring car; Mr. and Mrs. Eugene Sawin and son, in an Autocar; Mr. and Mrs. Howard Wilcox, Mrs. Elliot Flint and Duttee Wilcox, in a Searchmont; Mr. and Mrs. George W. Harris, who joined the party at Portsmouth, in a Columbia.

START OF RHODE ISLAND CLUB RUN FROM PROVIDENCE FOR BOSTON AND PORTSMOUTH, N. H., JUNE 24.

CALIFORNIA ENDURANCE RUN

Nine-Day Test Trip Between 'Frisco and Los Angeles Planned.

Special Correspondence.

SAN FRANCISCO, June 20.—The Automobile Club of California, in conjunction with the Automobile Club of Southern California, is making arrangements to hold an endurance run from San Francisco to Los Angeles and return. It is probable that the event will be held in July. The San Francisco cars, after running to Los Angeles, will be joined by the southern contestants, who will accompany the San Franciscans home and then return south, thus completing the round trip. Speeding will be discouraged. There will be an observer on each car, who will see that all the rules of the run, including the one forbidding high speed, are observed. It is expected that the round trip will require nine days.

BALTIMORE RACES JULY 4.

Special Correspondence.

BALTIMORE, June 27.—The first series of automobile and motor cycle races of the season will be held at Electric Park on July 4, under the management of Howard French, and provisions are being made for a large attendance.

The American Wheelmen will be represented in the club contest by their crack team, W. H. Kanne, William Morris and Bob Shanklin. Howard Gill, of Baltimore, will be on hand with his new *Baltimore Cyclone*, and W. A. Schaum will drive a machine of his own designing, built in Baltimore. Bob French's new 16-horsepower motor car will make its first public appearance during the races.

INFORMATION FOR BUYERS.

TRANSMISSION.—A very neat planetary transmission, giving two speeds forward and reverse, suitable for cars with motors up to 8-horsepower, is that made for the Automobile Supply Co., Chicago. The outside diameter is 9 1-2 inches and the outside with 8 1-4 inches. The band brakes are 1 1-2 inches wide, and there are no gears in operation on high speed.

AXLE GRAPHITE.—The Joseph Dixon Crucible Co., Jersey City, has brought out a new compound, called Everlasting Axle Grease, the main ingredients of which are a high grade grease and flake graphite. The idea is that the graphite works into the pores of the metal, and not only improves the lubricating qualities of the grease, but forms a surface glaze which will not rust, corrode or wear even if the grease becomes exhausted.

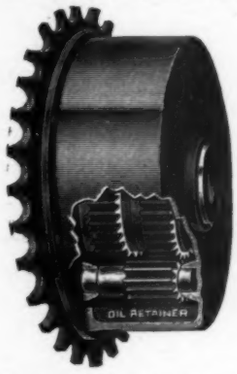
PORTABLE TURNTABLE.—By the use of the Weber Portable Turntable an automobile can be turned in any place where there is room without the necessity for cutting the floor to install a regular turntable. This device consists of a pair of small trucks secured parallel to each other, and connected by a small steel platform hung between them. Two of these pairs of trucks constitute a turntable. Either the front of the rear pair of wheels is run on a pair of trucks, when the heaviest car may be pushed around by one man. They are made by the Weber Cycle & Supply Co., Colorado Springs, Col.

SKID PREVENTER.—Owing to the fact that the skidding of rubber tires on greasy or icy roads cannot, apparently, be prevented by corrugations or other irregularities in the tread of the tire, automobilists have commonly resorted to the expedient of winding their tires with ropes or chains when such

WEED'S CHAIN TIRE GRIP.

roads could be avoided. Weed's chain tire grip is designed to take the place of such windings, as being more convenient to handle and at the same time more effective in operation. The illustration shows the arrangement of the device clearly. This appliance is warranted by the maker not to injure the tire, and is said to be very easy to apply and remove. Manufactured by H. D. Weed, Canastota, N. Y.

EQUALIZING GEAR.—A spur equalizing gear is being manufactured by the Cullman Wheel Company, Larrabee street, Chicago, in three sizes, suitable for motor vehicles of all sizes. The special feature of this gear is that the pinions are solid, having no holes for axles, the ends being extended to form



CULLMAN EQUALIZING GEAR.

bearings. This eliminates a source of weakness and reduces the number of parts. Better lubrication is claimed than with other methods of construction for the reason that oil can more readily reach the bearings. Special attention is given to making the gear case dustproof. The case and cover are of malleable iron and the pinions of steel hardened. The gears are also of steel. Sprockets are so attached that they can be removed at any time without disturbing any other part of the gear.

MICHELIN TIRES.—The Michelin tire has again made a grand showing of its fine qualities, this time in the recent French elimination trials for the Gordon Bennett cup race. The cars equipped with this famous tire made splendid runs, and there is no doubt as to what the French automobile experts think of the tire. The Michelin, owing to the scientifically corect manner in which the rubber is cured and the improved methods of laying on the fabric, possesses wonderful resiliency and at the same time is remarkably durable. In fact, durability is the point on which the makers and agents lay the greatest stress, for, after all, the durable tire is the one that will win out. The United States agency for the Michelin Tire Company, 140 West Twenty-seventh street, New York, is justly proud of the product it handles.

ANTI-PUNCTURE.—Ever since pneumatic tires began to be punctured, and that was as soon as they began to be used, inventors have been hard at work on all kinds of schemes to render them either proof against puncture, or self-healing. To the latter class belongs the compound manufactured by the New York Anti-Puncture Tire Co., 132 W. Forty-ninth street, New York. This material, which when cold is of the consistency of soft, spongy rubber, is melted in a water bath at a temperature of 212 degrees, when it assumes the consistency of thick cream. It is then pumped into the tire through the valve and the tire is rotated and moved about so that every portion of the interior is coated with the compound, the layer varying from 1-4 inch to 1-2 inch, according to the size of the tire. As it cools it returns to its original consistency and adheres strongly to the inner surface of the tire. The quantity required per tire varies from 3 to 10 pounds, according to size, the latter quantity being sufficient for the largest tires made.

HARRIS OILS.—The A. W. Harris Oil Company, South Water street, Providence, R. I., has made a specialty of grading lubricants according to their adaptability for use in water or air cooled gasoline motors, or in steam engines, whether using superheated steam or not, for sight feed or splash lubrication, electric vehicles and other work. The gas engine oil for water cooled motors is unusually fluid, thus permitting it to be fed with great regularity, and it is stated by the makers that it may, if necessary, be used for other than cylinder lubrication, and that when used in cylinders it will not carbonize and leave a deposit. Super gas engine oil for air cooled cylinders is heavier and less fluid. The Harris motor grease for compression cups and the graphite grease for chains are compounded for the special work they are expected to perform.

SPARK PLUG.—A new spark plug manufactured by Torbensen Gear, Incorporated, in which new features are embodied, is thoroughly well made. The insulation, of imported porcelain, is in one piece and is held in place by a single nut. Between the nut and the shoulder on the porcelain is interposed a packing gasket, making the plug gas-tight. The inner end of the porcelain core, which carries the central sparking point, is set into a very deep recess in the steel shell of the plug. The advantages of this arrangement are twofold First, the distance to be traveled by the secondary current before it can establish a short circuit is considerable—about 1 3-8 inch—and secondly, the pumping action of the gases entering and leaving the recess assists in a large measure in keeping the points clean. Instead of the usual threaded rod and nut for securing the wire

TORBENSEN PLUGS AND PARTS.

terminal, the T. G. I. plug is provided with a brass head in which a recess is turned. A spring clip, to which the wire is attached, snaps into this recess, being prevented from coming off by the closing of its jaws; but there is just a little play allowed so that there is no tendency to bend or twist the wire or clip. A small pamphlet issued by the manufacturers fully describes and illustrates the plug and terminal, as well as

the T. G. I. spark gap. It can be had on application to Torbenson Gear, Incorporated, Bloomfield, N. J.

AUTOMOBILE BARGAINS.—H. F. Borbein & Company, St. Louis, Mo., have bought out the business of the Brecht Automobile Company, and a lot of complete electric and steam automobiles, as well as a quantity of wheels, axles, knuckles, springs, etc., which cannot be used by the new proprietors in their styles of vehicles, will be sold at very low prices. A decriptive sheet gives prices and other information concerning the stock to be disposed of.

AUTO JACK.—A new automobile jack has been brought out by the Kenosha Jack Mfg. Co., Kenosha, Wis., which is said to be light, durable, powerful and positive in action. It is built of malleable iron of the best grade and has a rack and pinion movement, actuated by a worm, into which the T-handle, by which it is operated, is inserted. The rack can be pulled up to any desired height within the limits of the jack, the worm automatically disengaging and reengaging, when the rack is dropped, by its own weight. Capacity, 1 1-2 tons.

STEERING GEAR.—A new steering gear has been placed on the market by the Automobile Supply Co., 1339 Michigan Boulevard, Chicago, suitable for and attachable to any automobile weighing not over 1,200 pounds. A socket for the foot of steering column is provided, and also a crank to which the connecting rods are attached, and between these two are the cut steel gears, which may be run in grease. This gear can be supplied with column and rigid or tilting wheel, or without either, as may be desired.

REFRIGERATOR BASKET.—Nothing is more disagreeable when automobiling on a hot day than to find a carefully prepared lunch all dried up and warm and the drinkables tepid from the heat. A basket designed to keep provisions cool throughout a hot day has been offered to the automobiling public by the Burlington Basket Company, 33 Main street, Burlington, Iowa, which is said to fulfil its mission admirably. It is styled the Hawkeye refrigerator basket, and is made in two sizes, the small one 18 inches long, 10 inches wide and 8 inches deep, and the large size 20 inches long, 13 inches wide and 10 inches deep. A small compartment is filled with ice, and the insulation of the basket and cover "retains the cold and keeps out the heat." The basket is of convenient shape and is substantially made. Handles are provided for carrying.

FAMILY AUTOMOBILE.—The Bates Automobile Company, Lansing, Mich., is manufacturing a car especially for a family vehicle, and in its design and construction this end has always been in view. It is a tonneau car with side entrance; the tonneau is detachable. The backs of the seats are high and comfortable, being well upholstered. The 30-inch artillery wheels are fitted with large tires—3 1-2 inches in diameter—and these, together with the easy springs and long wheel base (92 inches), make the car an exceptionally comfortable one to ride in. Wheel steering is fitted, and a single lever controls the two forward speeds and reverse without resorting to foot pedals. The drive is by bevel gear, direct on the high speed, when the car will make 25 miles on hour. The three-cylinder vertical engine develops 18-horsepower, and is lubricated by the splash system. The jump spark system of ignition is used, the commutator being placed on the dash. The car is sent out with mud guards, two oil side lamps and a tail lamp and a gas headlight, horn and kit of tools.

TENNANT TIRES.—We are informed by the Tennant Auto-Tire Company, of Springfield, Mass., that the Tennant tires are not guaranteed unless they are inflated so that they will stand up round under load, the same as any other pneumatic tire, and unless the instructions which accompany tires are followed closely. Tennant tires will stand up without air for a few miles when first put on, but of course will eventually flatten down and destroy the tube if not pumped up. This caution seems necessary because of the experiences of automobilists who have undertaken to use these tires without air in the tubes, and after coming to grief as a consequence, have felt inclined to lay the fault to the tire.

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